

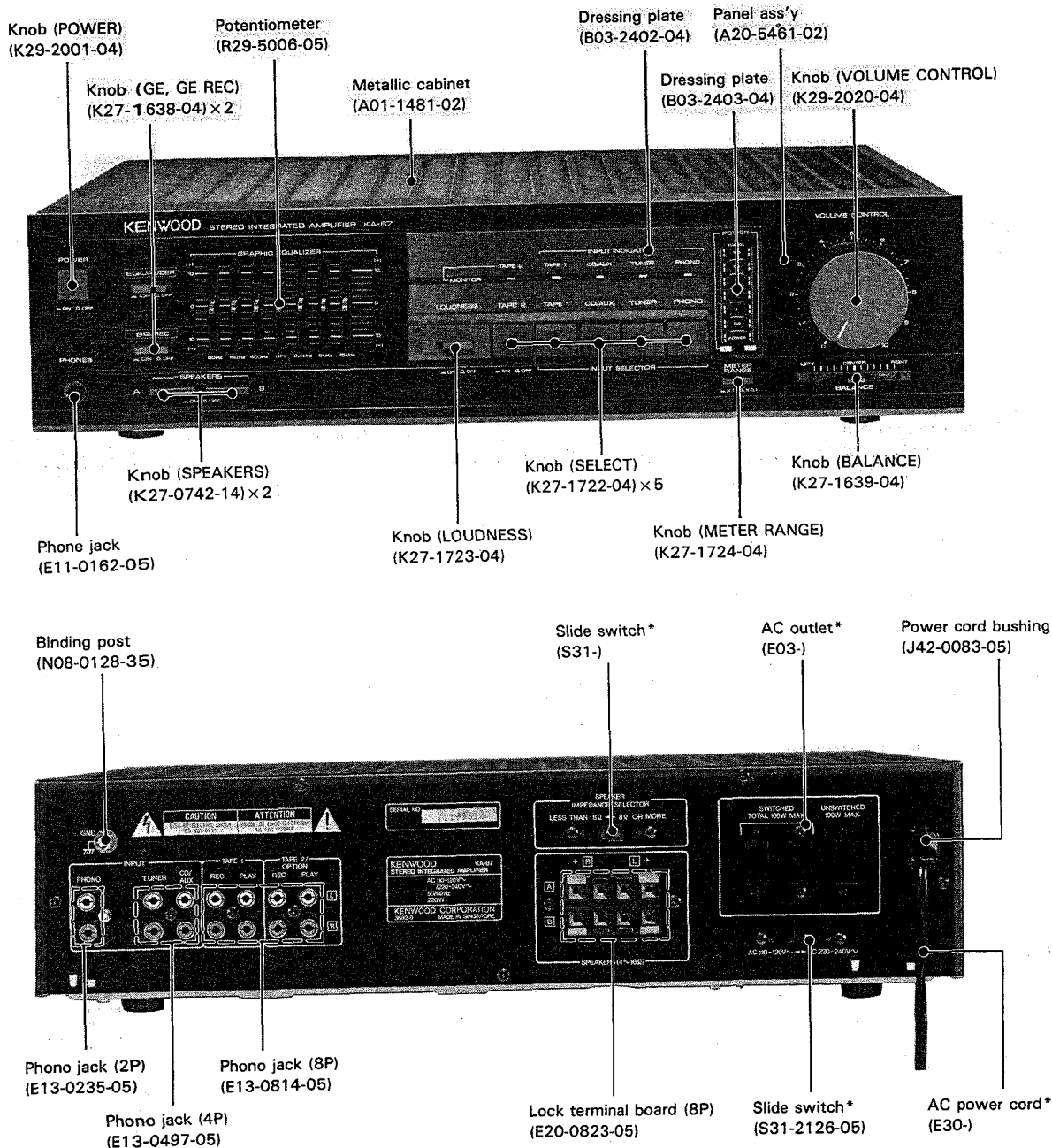
STEREO INTEGRATED AMPLIFIER

KA-87

SERVICE MANUAL

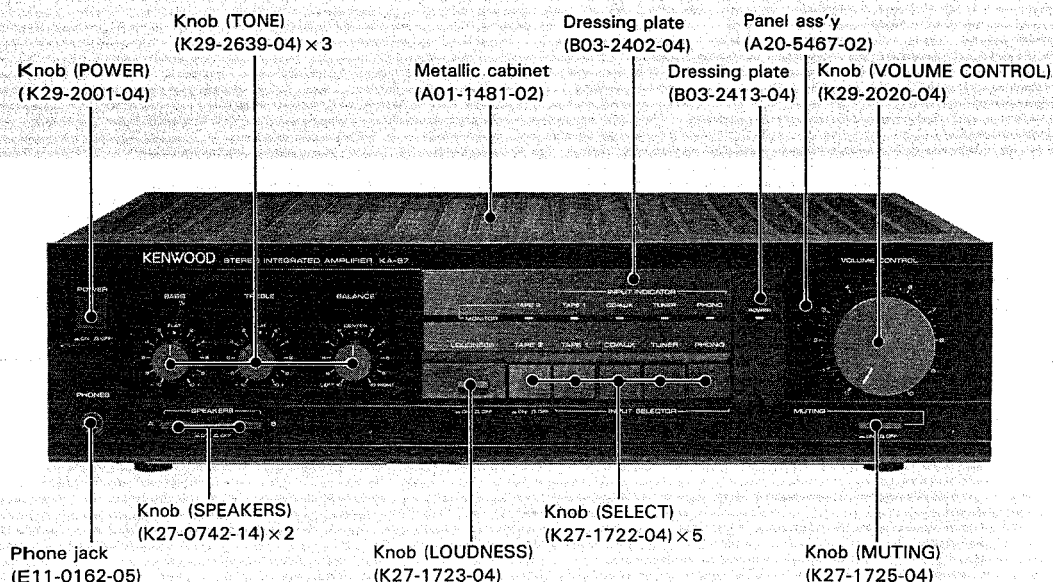
KENWOOD

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B51-3533-00(T)2848



* Refer to parts list on page 27.
Photo is KA-87 (U.S.A., Canada and P.X. models).

KA-87 (OTHER MODELS)



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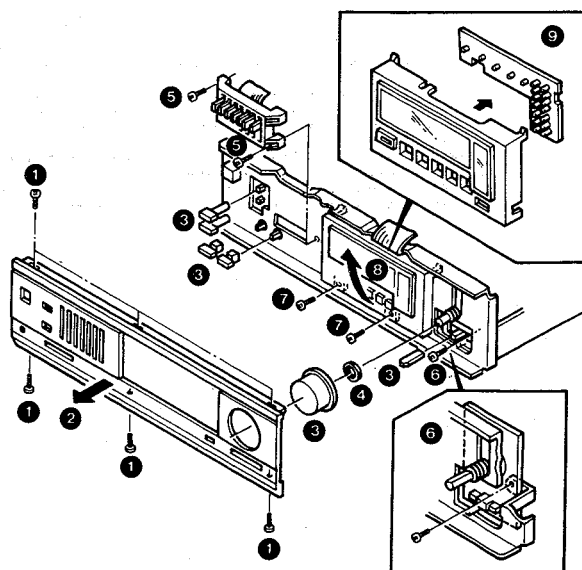
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DISASSEMBLY FOR REPAIR

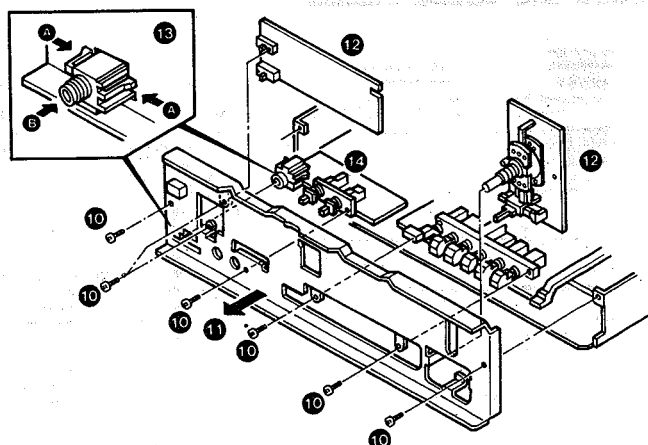
U.S.A. and Canada models

1. Remove the metallic cabinet before this operation.
2. Remove the 6 screws fixing the front panel to the sub panel (1).
3. Remove the front panel in the direction of the arrow (2).
4. Pull out the 1 knob from the VOLUME CONTROL shaft and the 5 buttons from the EQUALIZER, EQUALIZER REC, SPEAKERS and BALANCE shafts (3).
5. Remove the 1 hex. nut from the VOLUME CONTROL shaft (4).
6. Remove the 2 screws fixing the GRAPHIC EQUALIZER to the sub panel (5).
7. Remove the 1 screw fixing the Sub-Circuit Unit (X13-) (B/2) (6).
8. Remove the 2 screws fixing the escutcheon to the sub panel (7).
9. Remove the escutcheon in the direction of the arrow (8).
10. Remove the Sub-Circuit Unit (X13-) (A/2) in the direction of the arrow (9).



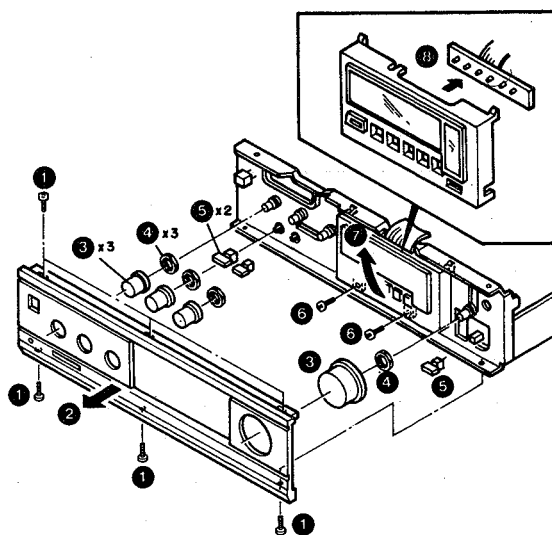
DISASSEMBLY FOR REPAIR

11. Remove the 7 screws on the sub panel (10).
12. Remove the sub panel in the direction of the arrow (11).
13. Remove the Sub-Circuit Unit (X13-) (B/2) and Tone Unit (X11-) (12).
14. Disengage the claws of the PHONES jack (13).
15. Remove the Audio Unit (X09-) (B/5) (14).

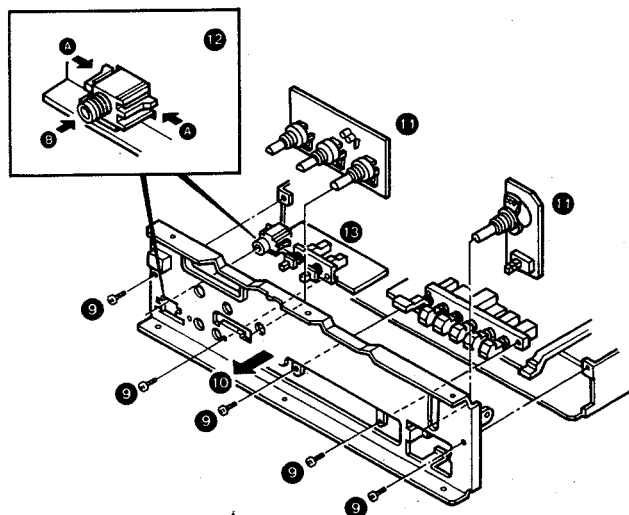


Other models

1. Remove the metallic cabinet before this operation.
2. Remove the 6 screws fixing the front panel to the sub panel (1).
3. Remove the front panel in the direction of the arrow (2).
4. Remove the 4 knobs from the BASS, TREBLE, BALANCE and VOLUME CONTROL (3).
5. Remove the 4 hex. nuts from the BASS, TREBLE, BALANCE and VOLUME CONTROL shafts (4).
6. Pull out the 2 buttons from the SPEAKERS shafts and the 1 button from the MUTING shaft (5).
7. Remove the 2 screws fixing the escutcheon to the sub panel (6).
8. Remove the escutcheon in the direction of the arrow (7).
9. Remove the Audio Unit (X09-) (E/5) in the direction of the arrow (8).



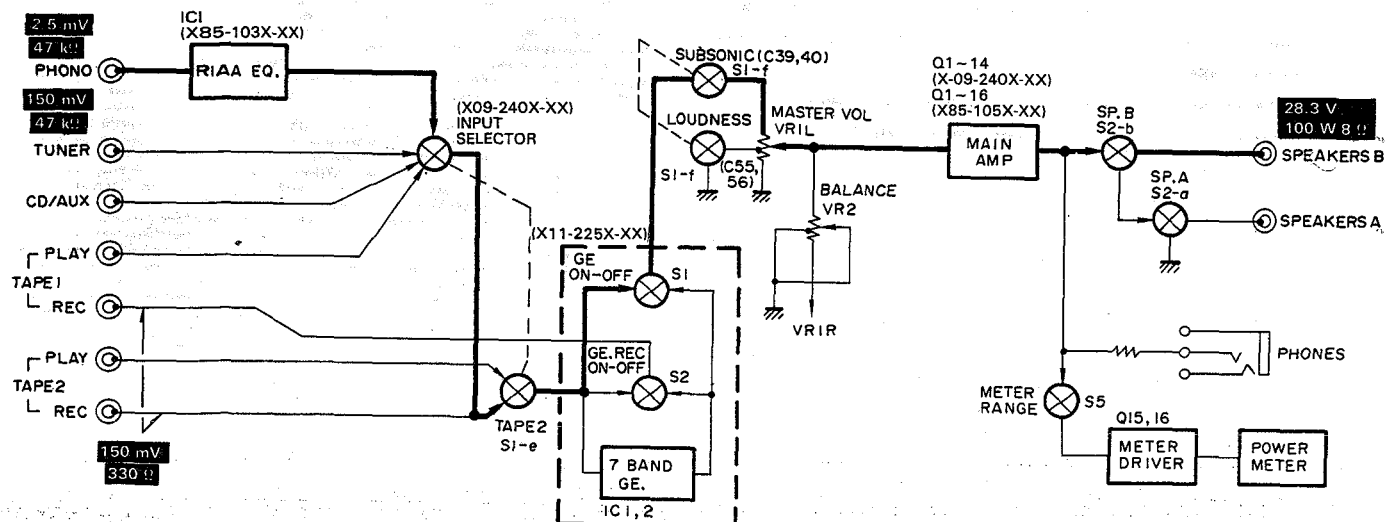
10. Remove the 5 screws on the sub panel (9).
11. Remove the sub panel in the direction of the arrow (10).
12. Remove the Audio Unit (X09-) (C/5) and Tone Unit (X11-) (11).
13. Disengage the claws of the PHONES jack (12).
14. Remove the Audio Unit (X09-) (B/5) (13).



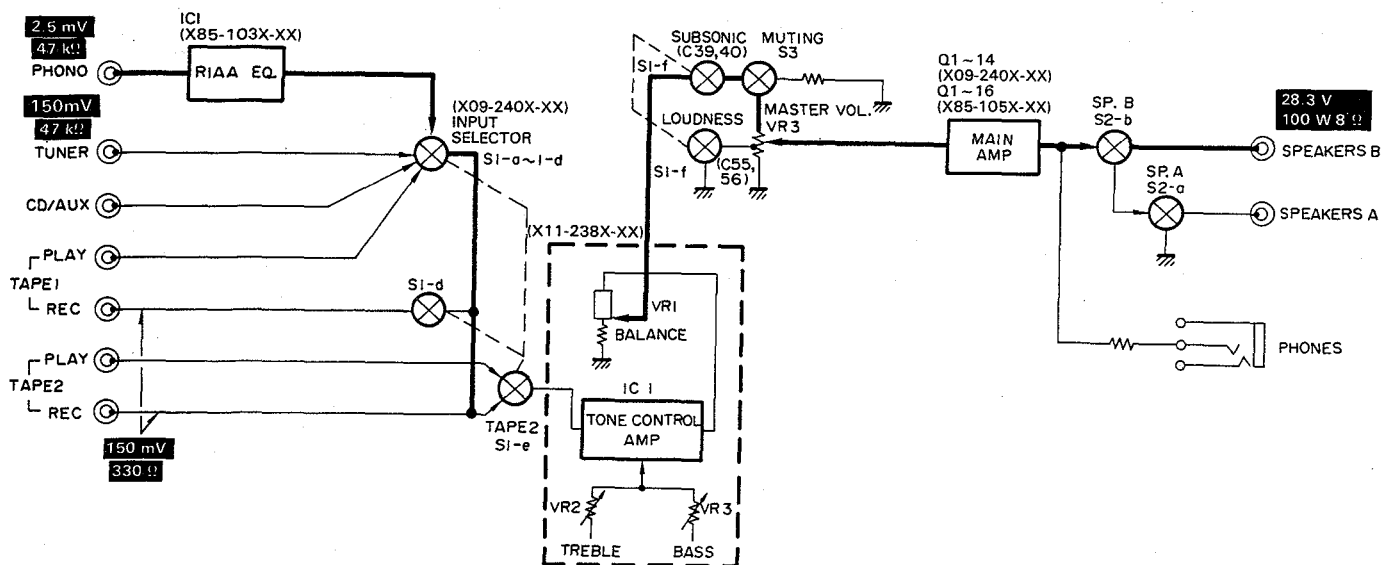
KA-87

BLOCK & LEVEL DIAGRAM

U.S.A. and Canada models



Other models



CIRCUIT DESCRIPTION

List of the units used in KA-87

Unit	Area	K, P	E, T, X	M
Power supply unit X00-239X-XX		1-01 (1-02)	0-51 (0-52)	0-81 (0-83)
Tone unit X11-2382-XX		Not used	70 (70)	71 (71)
Sub-circuit unit X13-5620-XX		10 (12)	Not used	Not used
Audio unit X09-240X-XX (X09-263X-XX)		0-10 (0-10)	2-71 (2-71)	0-21 (0-21)
Preamplifier unit X85-103X-XX (X85-111X-XX)		0-11 (0-10)	2-72 (2-71)	0-11 (0-10)
Power amplifier unit X85-105X-XX		0-11 (0-13)	2-71 (2-72)	0-11 (0-13)
Tone unit (Graphic equalizer) X11-2250-XX		10 (11)	Not used	Not used

The units shown in bracket () are manufactured in Singapore. Although it has the different part number, the details are the same.

Description of components

Audio unit (X09-240X-XX or X09-263X-XX)

Component	Application/function	Operation/condition/compatibility
Q1	+ voltage regulation	
Q2	- voltage regulation	
Q3, 4	Thermal compensation	C4137: High β transistor. (hfe 560 or more)
Q5-8	Driver	
Q9-12	Final stage power amp	
Q13, 14	Over current protection	
Q15, 16	Meter drive	
IC1	Protection IC	

Tone unit (X11-2250-XX) (K, P, types)

Component	Application/function	Operation/condition/compatibility
IC1, 2	IC for 7 band graphic equalizer	Circuit supplied by manufacture is input composition type, but output composition type is used considering noises.

Tone unit (X11-2382-XX) (M, X & E types)

Component	Application/function	Operation/condition/compatibility
IC1	Tone amp	Output configuration tone amp.

Sub-circuit unit (X13-5620-XX) (K, P, types only)

Component	Application/function	Operation/condition/compatibility
Q1, 2	LED drive	Power meter LED driver.

Preamplifier unit (X85-103X-XX or X85-111X-XX)

Component	Application/function	Operation/condition/compatibility
IC1	EQ Amplifier	For Phono.

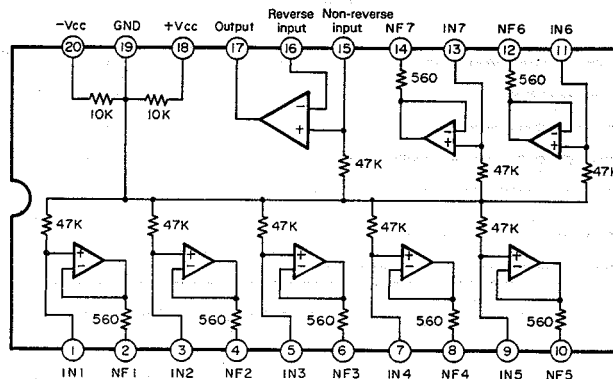
Power amplifier unit (X85-105X-XX)

Component	Application/function	Operation/condition/compatibility
Q1-4	Class A 1st stage differential amp	
Q5-8	2nd stage differential amp	
Q9, 10	Class A amp	
Q11-14	3rd stage differential amp	2SC1904.
Q15, 16	Current mirror circuit	2SA899.

CIRCUIT DESCRIPTION/ADJUSTMENT/REGLAGES/ABGLEICH

7 band graphic equalizer IC (IC1, 2) : M5229P (X11-2250-10) (K, P types)

• Block diagram



ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT	—	Connect a DC voltmeter across CP1 (L) CP2 (R)	VOLUME: 0	VR1 (L) VR2 (R)	3mV	(a)

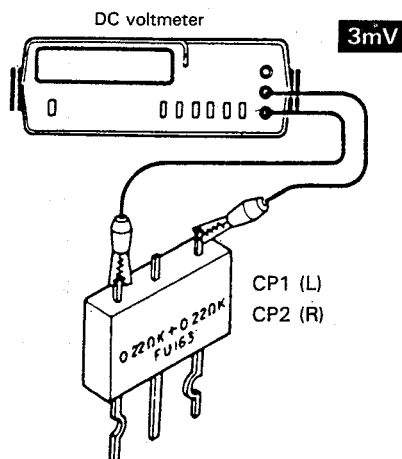
REGLAGES

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINS L'ALIGNEMENT	ALIGNER POUR	FIG.
1	COURANT DE POLARISATION	—	Connecter un voltmètre de CC sur CP1 (G) CP2 (D)	VOLUME: 0	VR1 (G) VR2 (D)	3mV	(a)

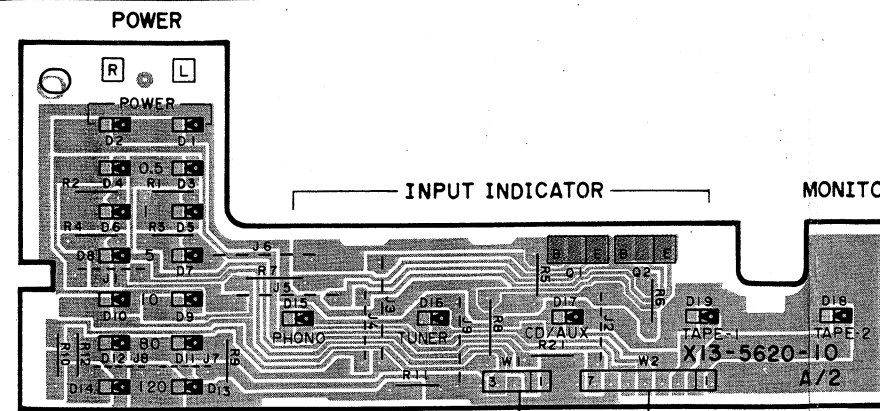
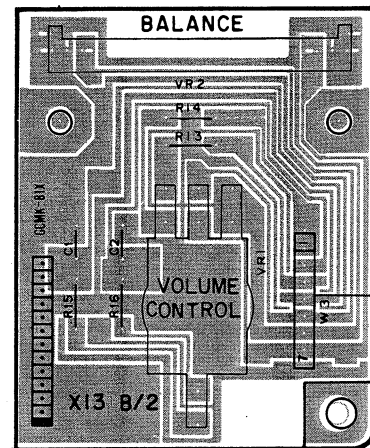
ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VERSTÄRKER EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
1	LEERLAUFSTROM	—	Einen Gleichspannungsmesser ber CP1 (L) CP2 (R) anschießen.	VOLUME: 0	VR1 (L) VR2 (R)	3mV	(a)

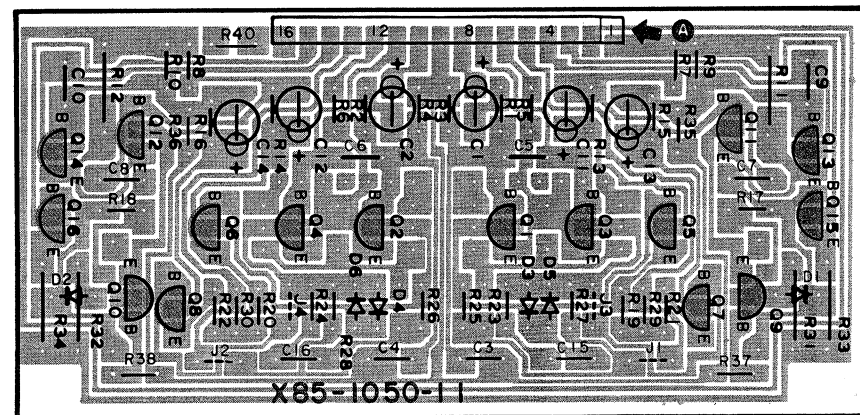
(a)



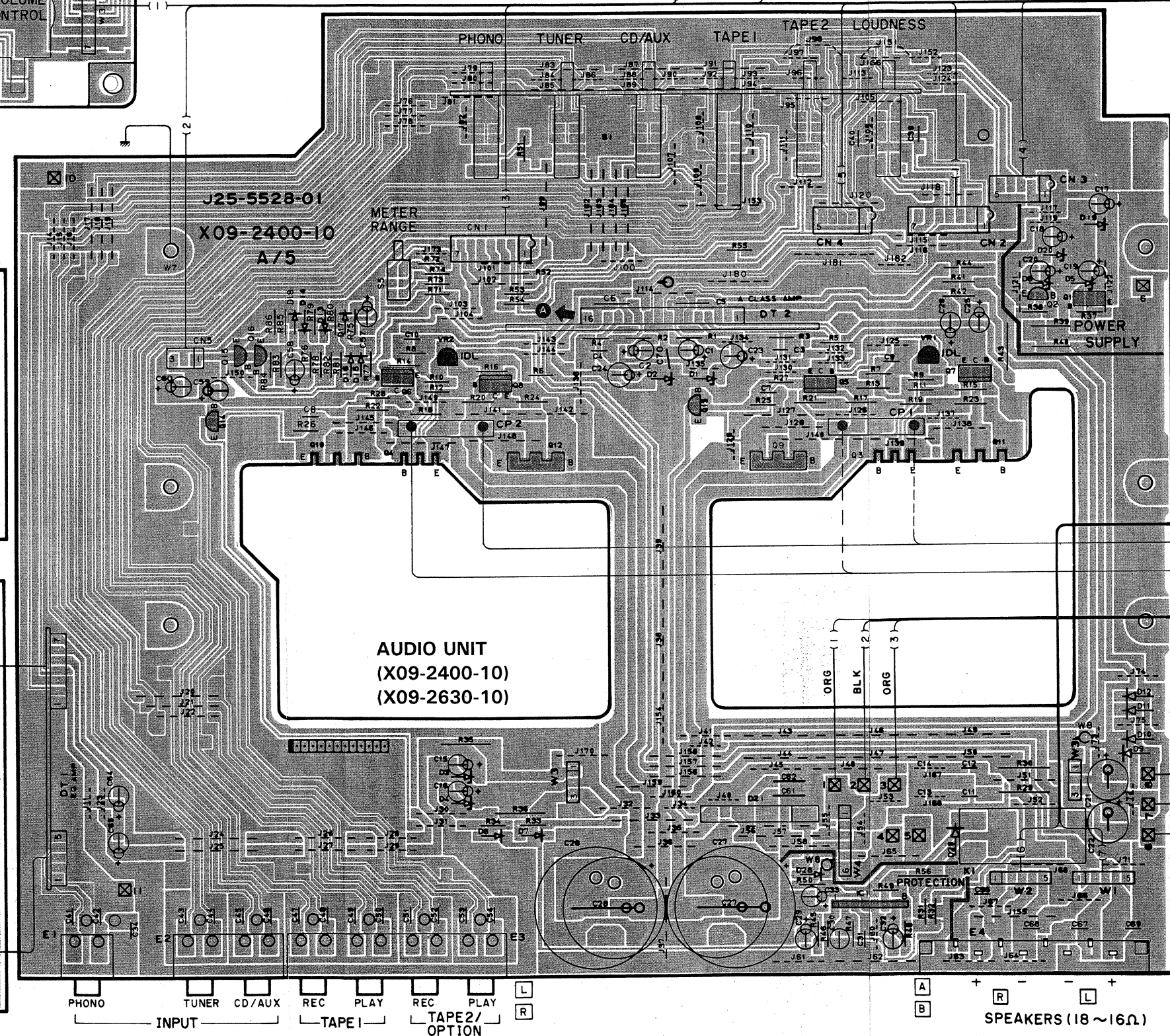
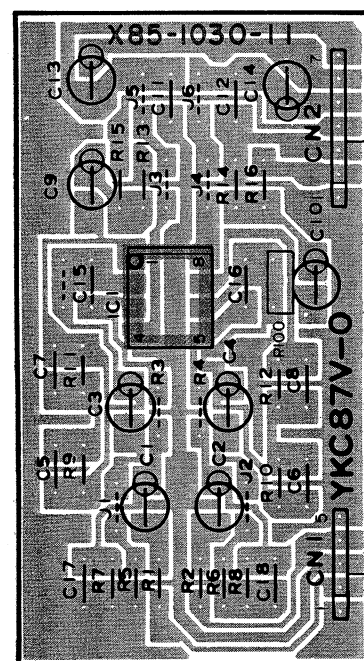
PC BOARD (U.S.A. and Canada models) (Component side view)



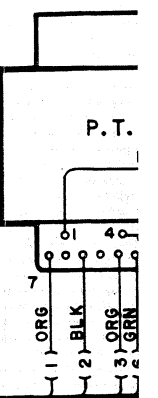
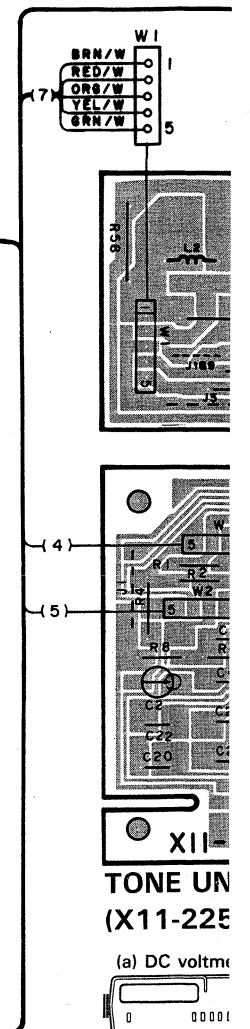
POWER AMPLIFIER UNIT (X85-1050-XX)



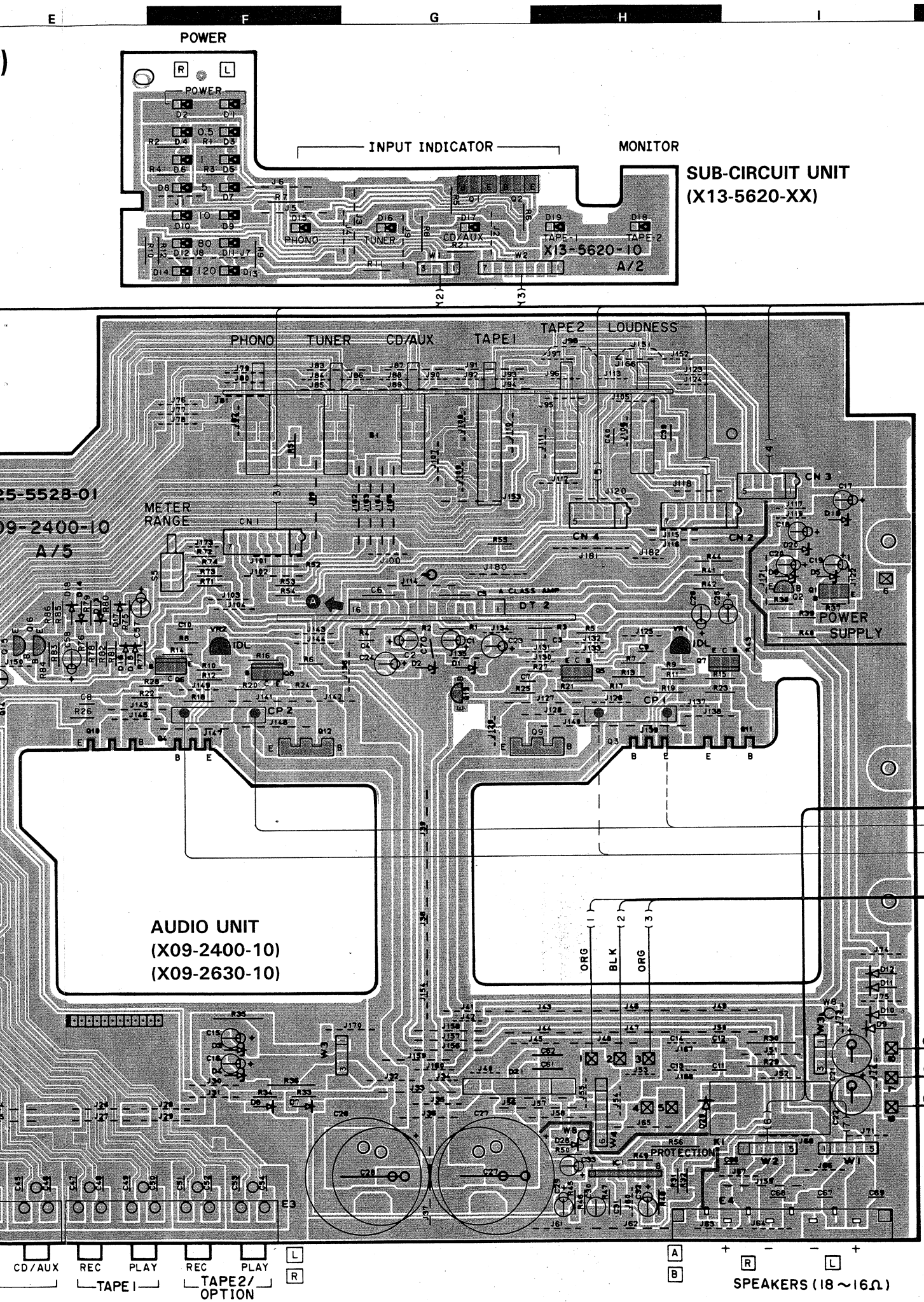
PREAMPLIFIER UNIT
(X85-1030-11)
(X85-1110-10)



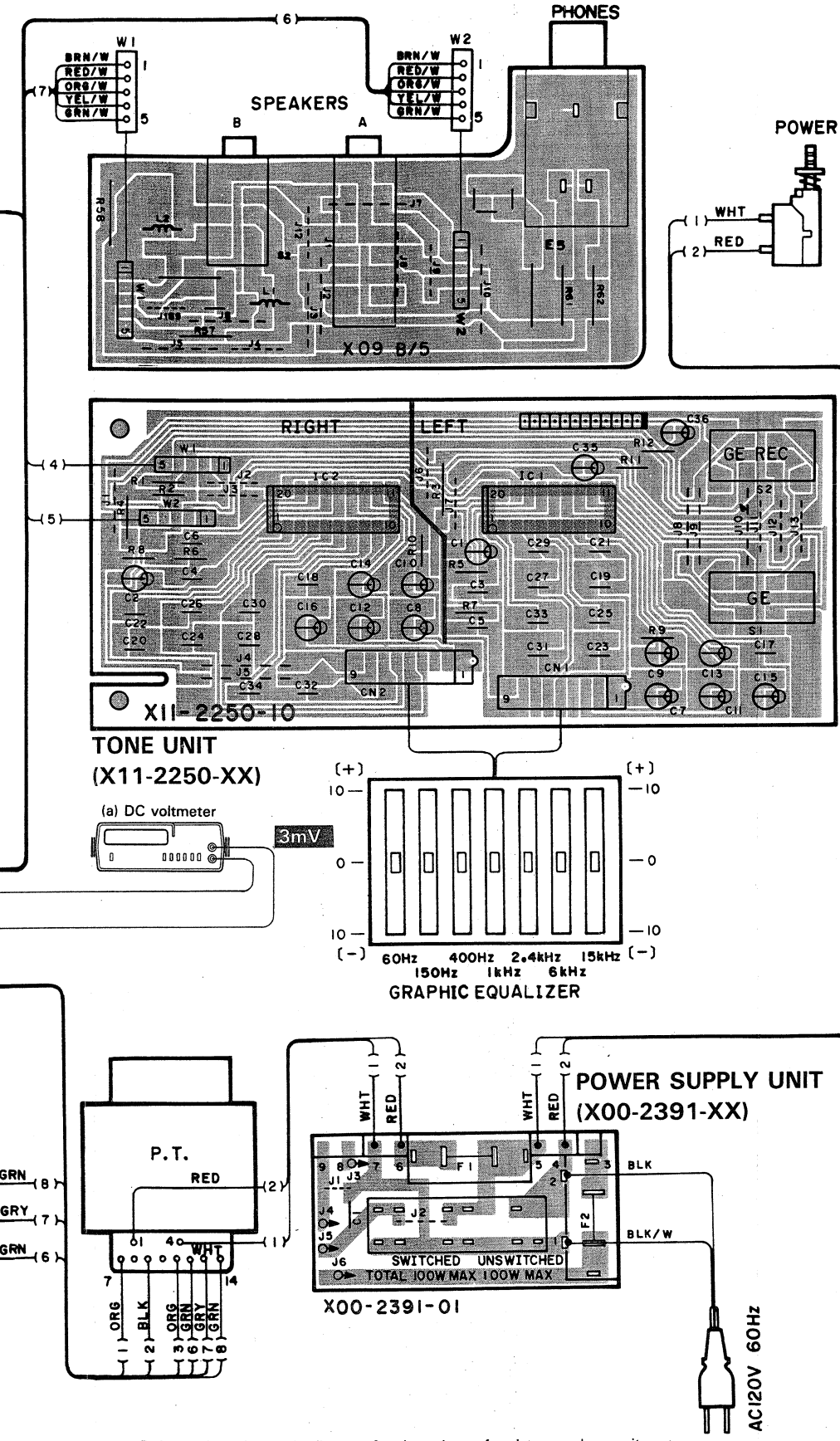
SUB-CIRCUIT UNIT
(X13-5620-XX)



SPEAKERS (18 ~ 16Ω)



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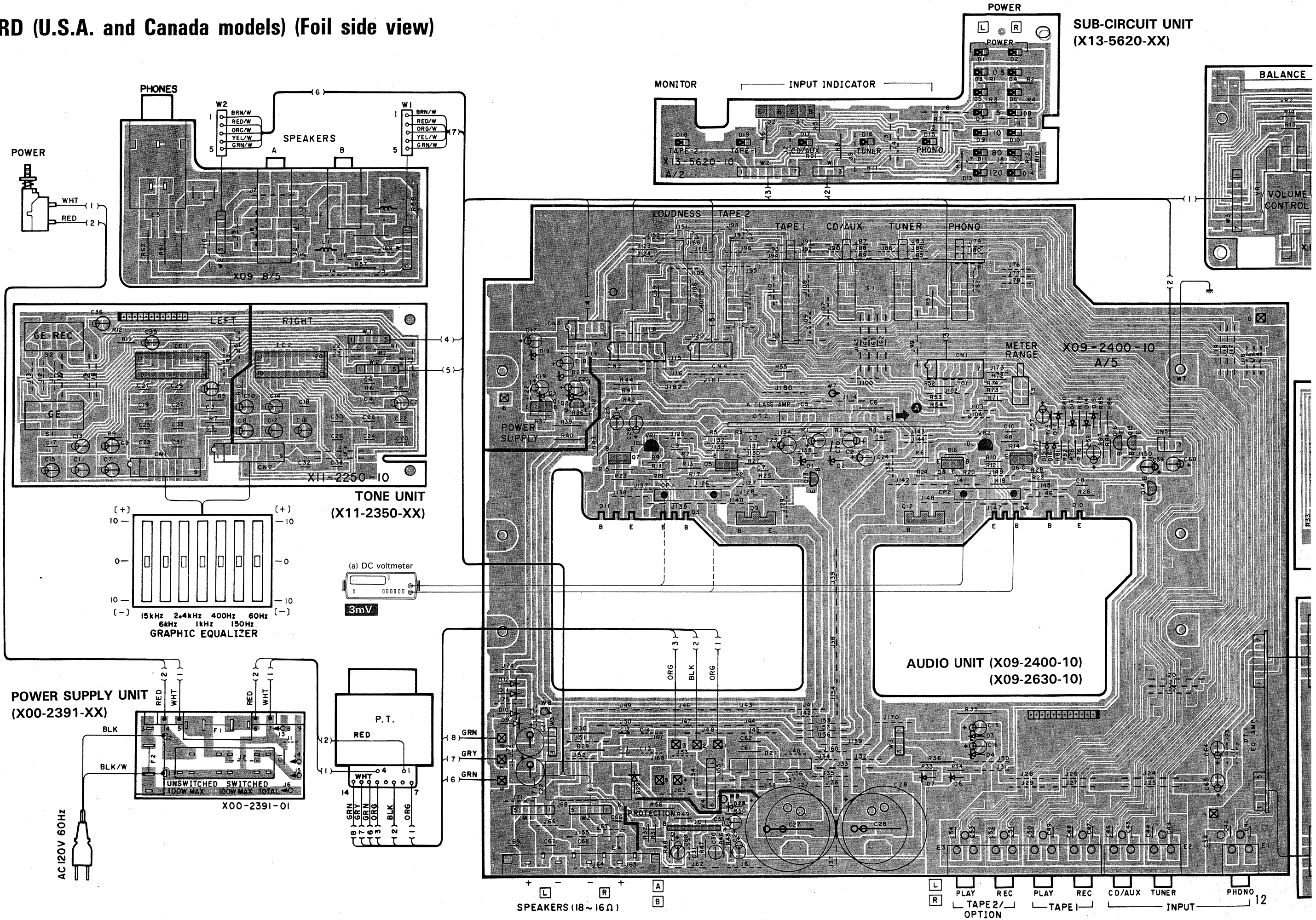
Refer to the schematic diagram for the values of resistors and capacitors.

KA-87 (K, P)

X85-1030-11 X85-1110-10 IC1	4	-18.8V
	8	18.3V
X85-1050-11 X85-1050-13 Q1-4	E	0V
	C	17V
X11-2250-10 X11-2250-11 IC1, 2	18	18V
	19	0V
X09-240X-XX X09-263X-XX Q3	E	-0.6V
	C	45.2V
Q4	E	-1.2V
	C	1.2V
Q11, 12	E	-49.1V
	C	-0.6V
Q13, 14	E	-49.1V
	C	-1.2V
Q5	E	-
	C	67V
Q6	E	-
	C	67V
Q7, 8	E	-
	C	-67V
Q9, 10	E	-
	C	67V
Q11, 12	E	-
	C	-67V
Q1	E	18V
	C	25V
Q2	E	-18V
	C	-23.6V
IC1	4	2.7V
	6	0.75V
	7	2.2V
	8	3.3V

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PC BOARD (U.S.A. and Canada models) (Foil side view)

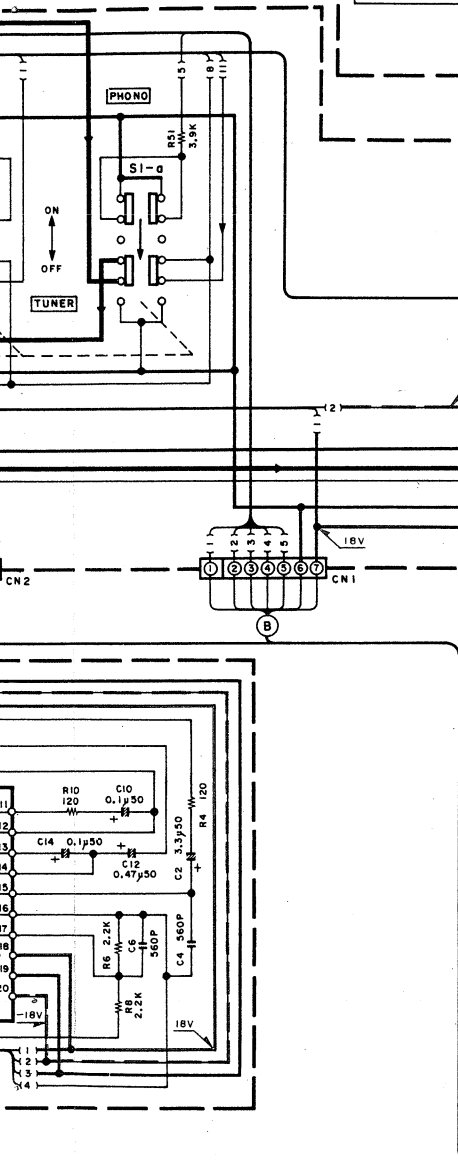


X85-1030-11)
X85-1110-10)
IC1 : AN6556 or M5218P

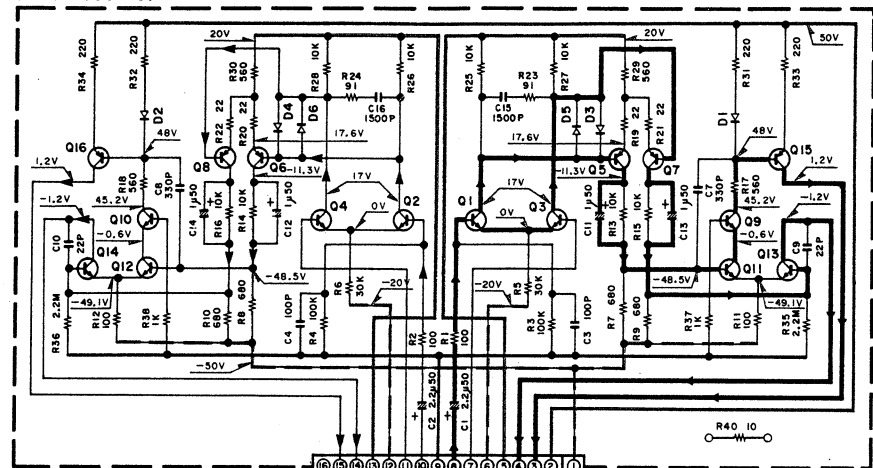
X85-1050-11)
X85-1050-13)
Q1-4 : 2SC1845(F,E)
Q5-8 : 2SA992(F,E)
Q9-14 : 2SC2632(Q,R,S)
Q15,16 : 2SA1124(Q,R,S)

D1-6 : ISS176 or ISS133

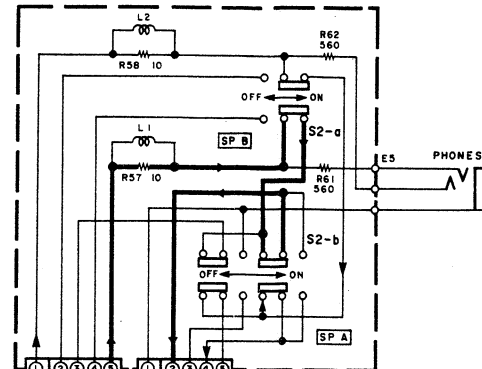
Ref. No.	R100
ESTIMATION	
(X85-1030-11)	22
(X85-1110-10)	10



(X85-1050-11)
(X85-1050-13)



(X09-240X-XX) (B/5)
(X09-263X-XX) (B/5)



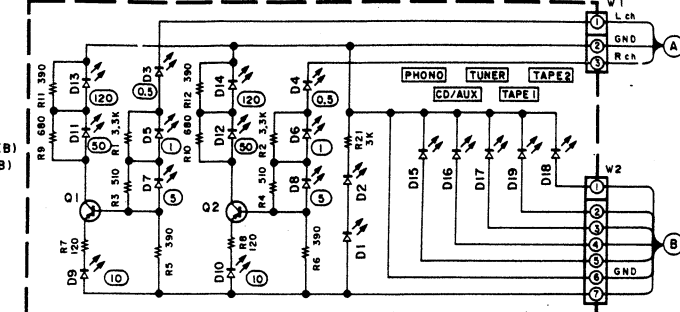
(X09-240X-XX)
(X09-263X-XX)
IC1

μPC1237HA
Q1 : 2SD882(R,Q,P,E)
Q2 : 2SA954(L,K)
Q3,4 : 2SC3419(Y)
Q5,6 : 2SC3944(R,Q,S)
Q7,8 : 2SA1535(R,Q,S)
Q9,10 : 2SD1718
Q11,12 : 2SB1163
Q13,14 : 2SA733(A)(Q,P)
Q15,16 : 2SC945(A)(Q,P)

D1,2 : RD20ES(B) or HZS20S(B)
D3-6 : RD16ES(B) or HZS16S(B)
D7,8,13-18,28,29 : ISS133 or ISS176
D9-12 : DSM1A1
D21 : RBV-602LFA

	JAPAN MADE		SINGAPOLE MADE	
	K,P	U,UE	K,P	U,UE
(X00-239W-WK)	I-01	O-8I	I-02	O-83
(X09-240W-WK)	O-10	O-8I	NO	NO
(X09-263W-WK)	NO	NO	O-10	O-8I
(X11-225W-WK)	O-10	O-10	O-11	O-11
(X13-562W-WK)	O-10	O-10	O-12	O-12
(X85-1030-11)	YES	YES	NO	NO
(X85-1110-10)	NO	NO	YES	YES
(X85-105W-WK)	O-11	O-11	O-13	O-13

(X13-5620-10) (A/2)
(X13-5620-12) (A/2)



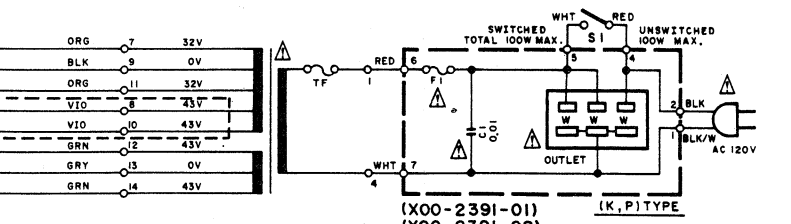
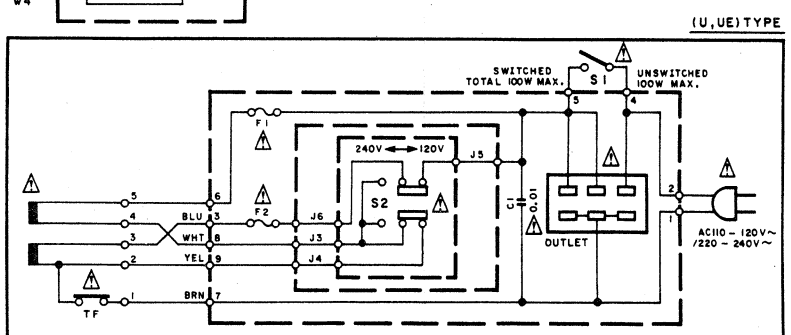
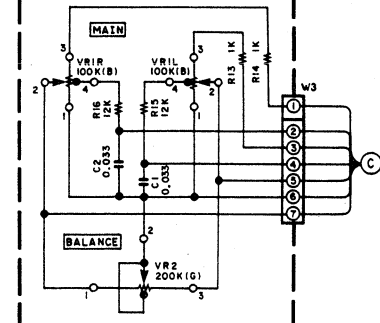
Q1,2 : 2SA937F(R,Q,S)
D1-19 : B30-0431-05

DESTINATION	Ref. No.	J54,55	A
O-10	K,P	YES	NO
O-B1	U,UE	NO	YES

(X09-240X-WX)
(X09-263X-WX)
SPEAKERS B
SPEAKERS A (X09-2400-81) (D/5) (U,UE) TYPE ONLY
(X09-2630-81) (D/5) (U,UE) TYPE ONLY

SIGNAL LINE
GND LINE
+B LINE
-B LINE

(X13-5620-10) (B/2)
(X13-5620-12) (B/2)



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

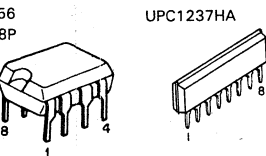
Built-in graphic equalizer

KA-87
KENWOOD

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un volt-mètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

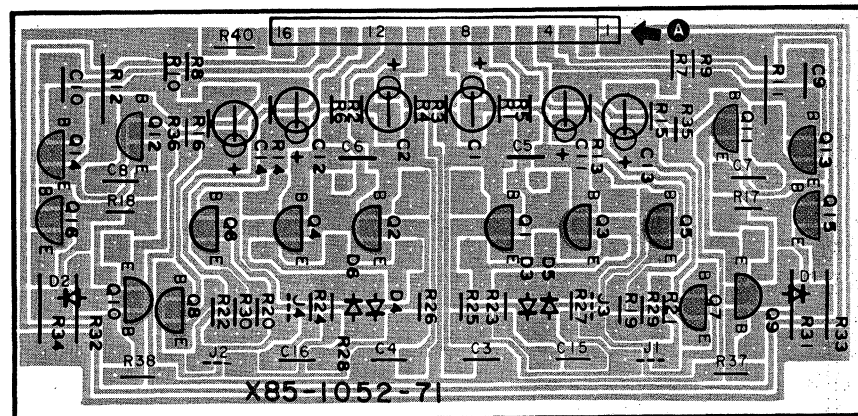
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.



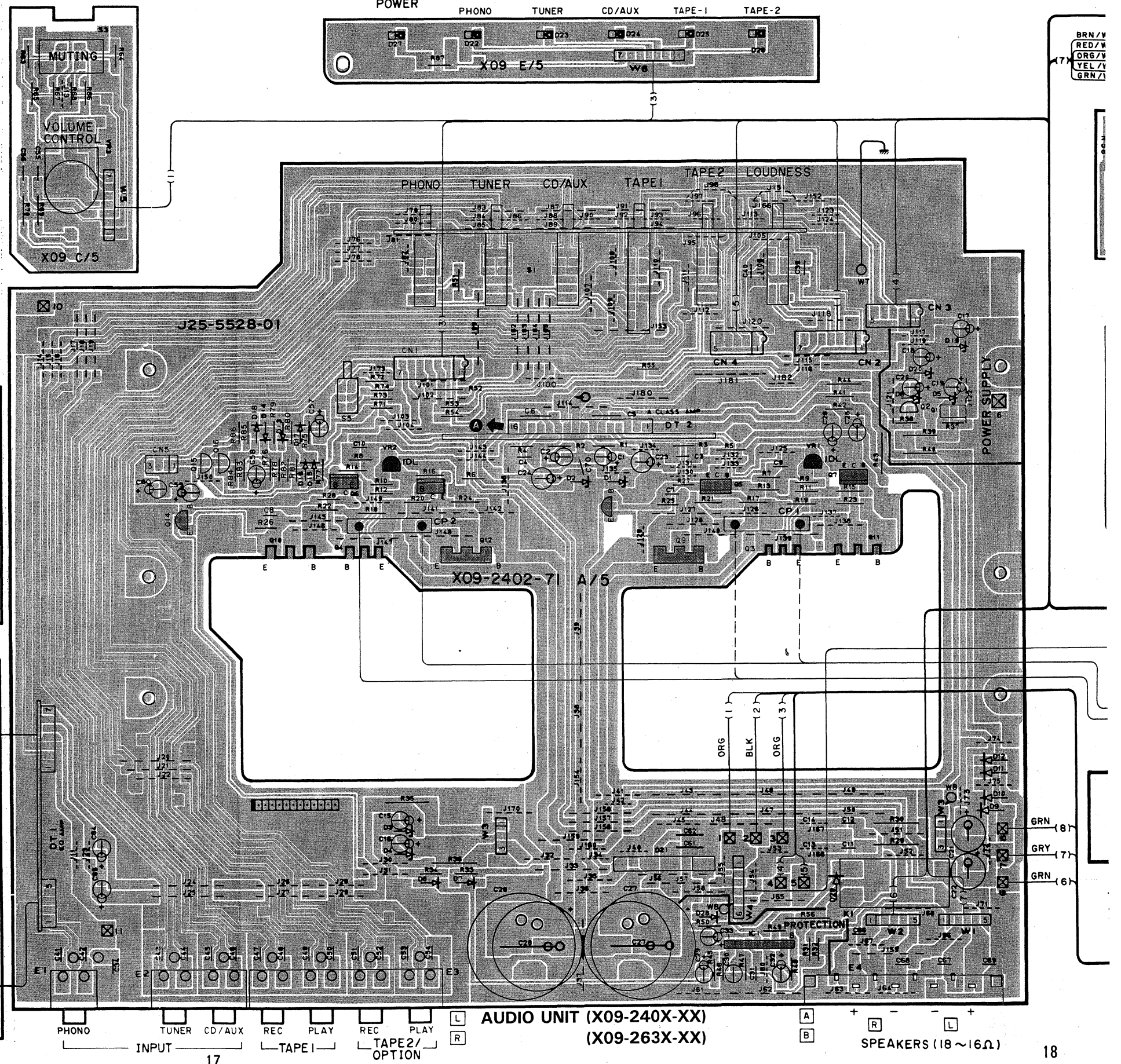
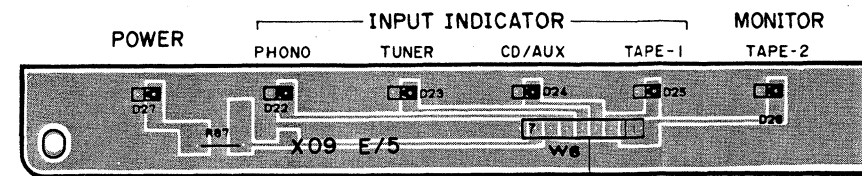
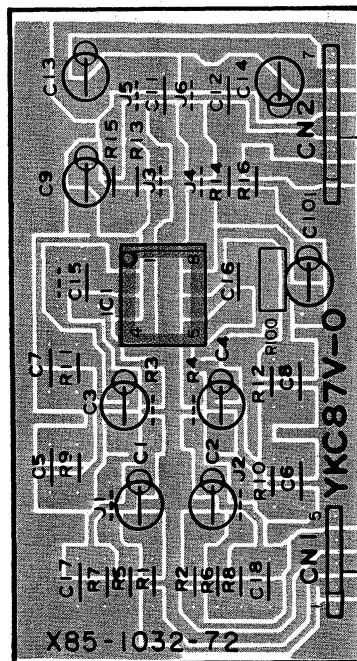
PC BOARD (Other models) (Component side view)

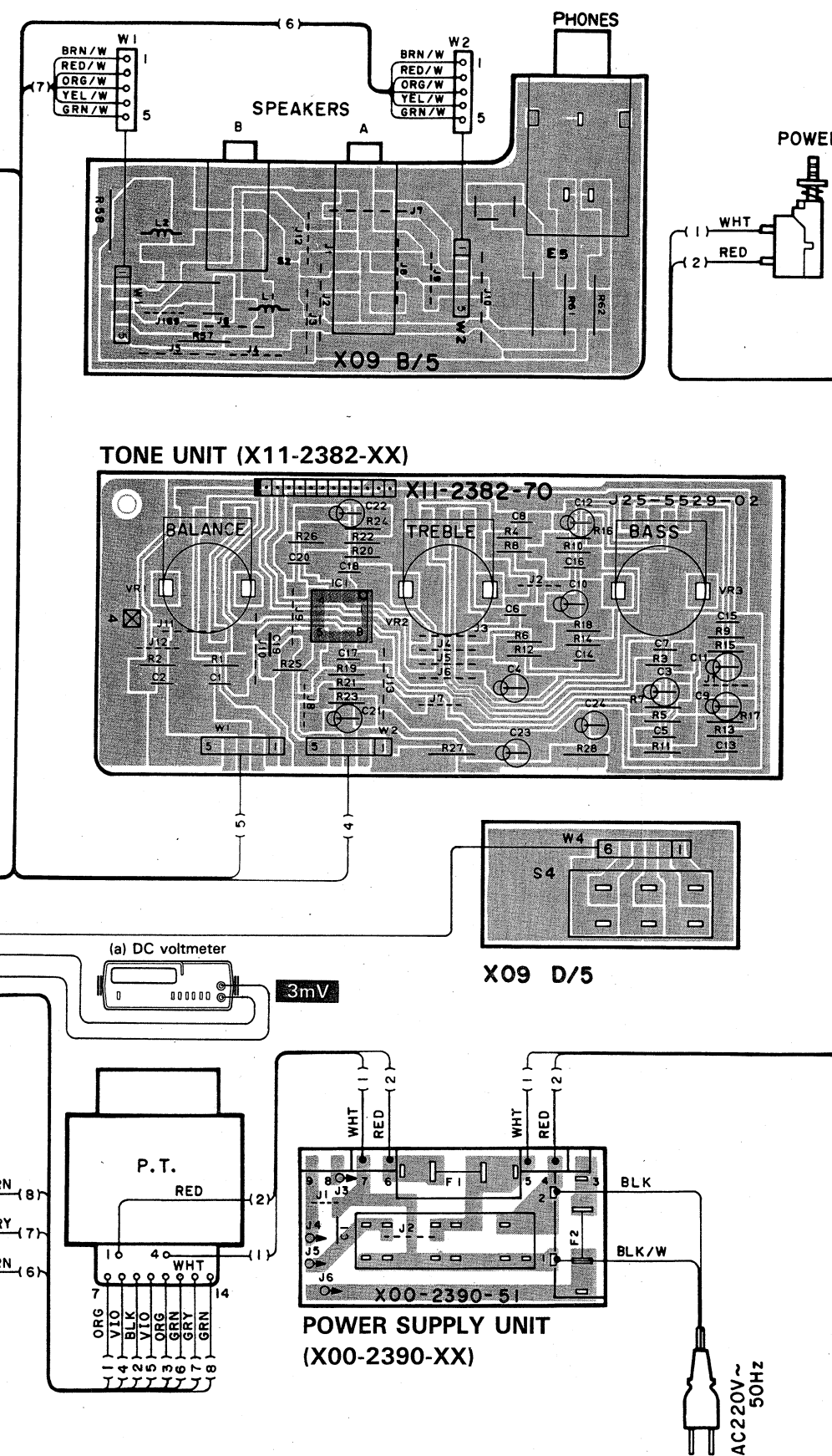
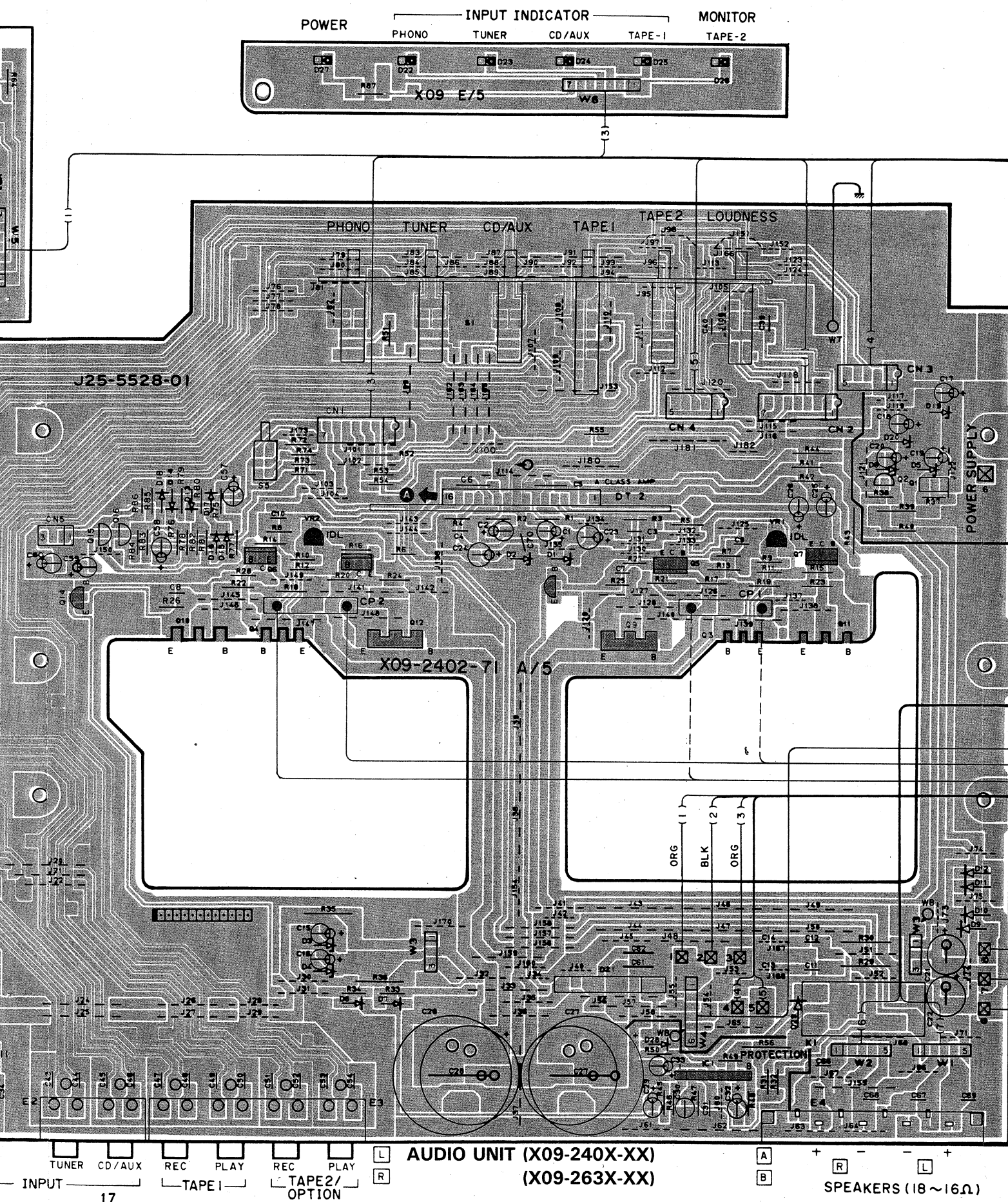
FRONT

POWER AMPLIFIER UNIT (X85-105X-XX)



PREAMPLIFIER UNIT
(X85-103X-XX)
(X85-111X-XX)





X85-103X-XX
X85-111X-XX
IC1

4	-18.8V
8	18.3V

X11-2382-70
X11-2382-71
IC1

4	-16V
8	16V

X09-240X-XX
X09-253X-XX
Q3

E	-1.2V
C	1.2V
B	-

Q4

E	-1.2V
C	1.2V
B	-

Q5 (X,E,T)

E	-
C	60V (44V)
B	-

Q5 (M)

E	-
C	67V (47V)
B	-

Q6 (X,E,T)

E	-
C	60V (44V)
B	-

Q6 (M)

E	-
C	67V (47V)
B	-

Q7, 8 (X,E,T)

E	-
C	-60V (-44V)
B	-

Q7, 8 (M)

E	-
C	-67V (-47V)
B	-

Q9, 10 (X,E,T)

E	0V
C	60V (44V)
B	-

Q9, 10 (M)

E	-
C	67V (47V)
B	-

Q11, 12 (X,E,T)

E	-
C	-80V (-44V)
B	-

Q11, 12 (M)

E	-
C	-80V (-44V)
B	-

Q11, 12 (X,E,T)

E	-
C	-80V (-44V)
B	-

Q11, 12 (M)

E	-
C	-80V (-44V)
B	-

Q11, 12 (M)

E	-
C	-67V (-47V)
B	-

IC1 (X,E,T)

4	1.8V
6	0.75V
7	2.2V
8	3.3V

IC1 (M)

4	2.7V
6	0.75V
7	2.2V
8	3.3V

X85-105X-XX
Q1-4

E	0V
C	17V
B	-

Q5-8

E	17.6V
C	-11.3V
B	17V

Q9, 10

E	-0.6V
C	45.2V
B	-

Q11, 12

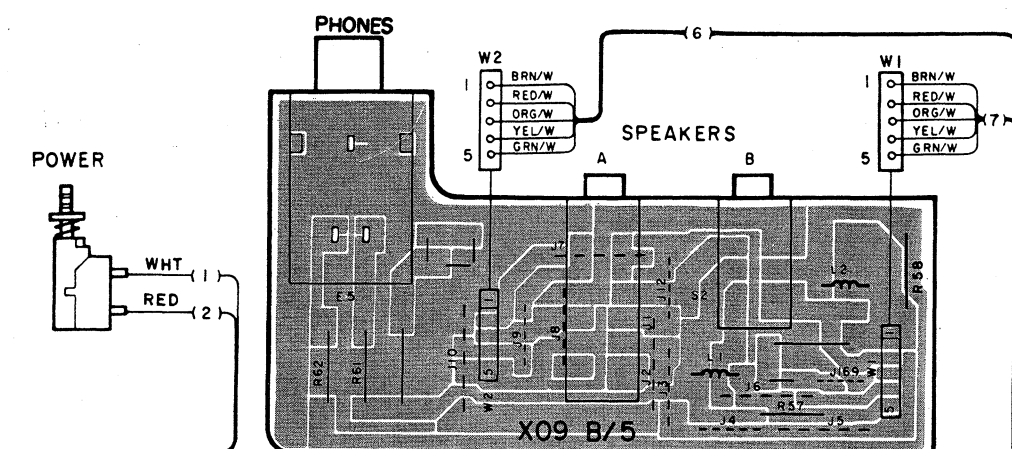
E	-49.1V
C	-0.6V
B	-48.5V

Q13, 14

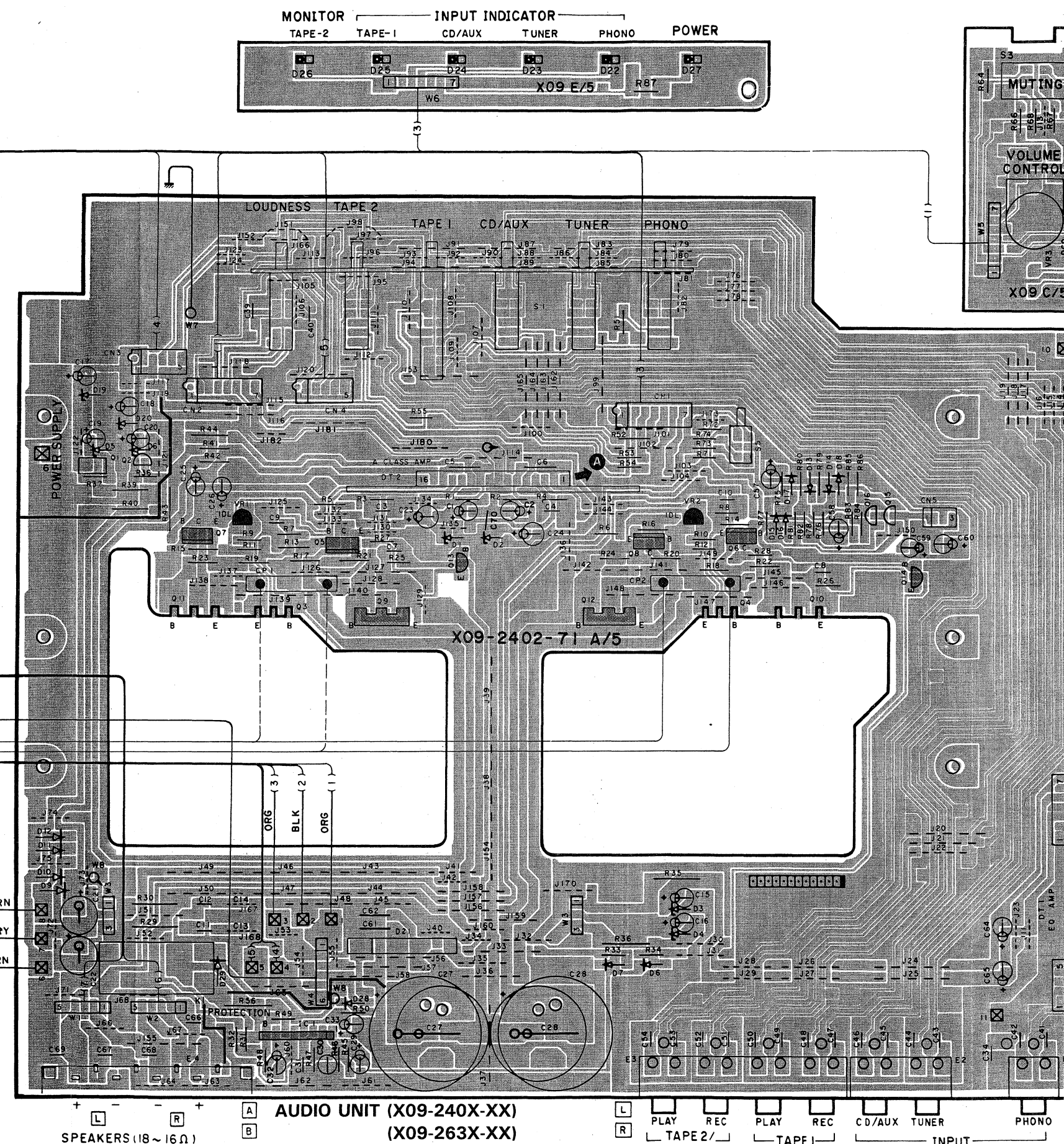
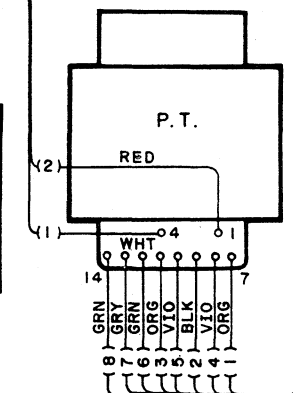
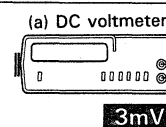
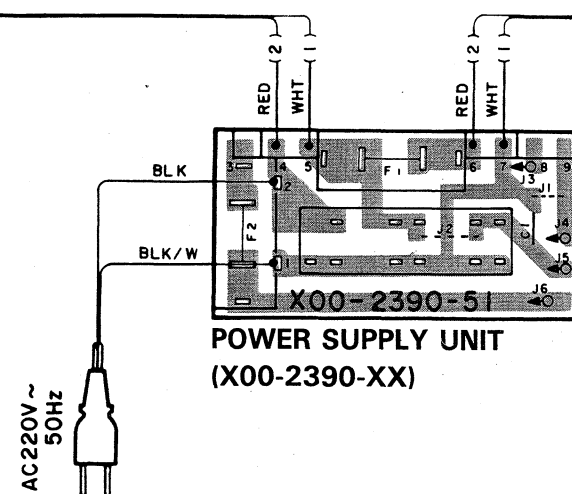
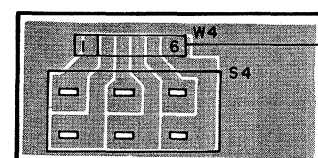
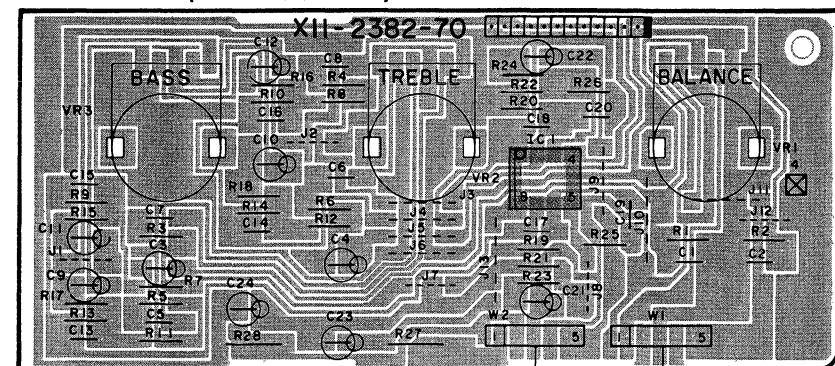
E	-49.1V
C	-1.2V
B	-

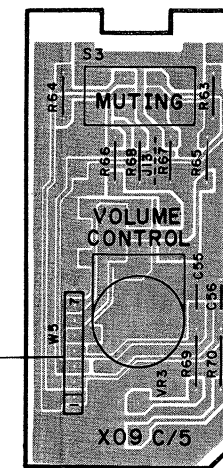
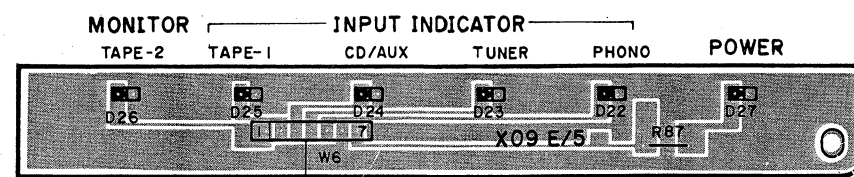
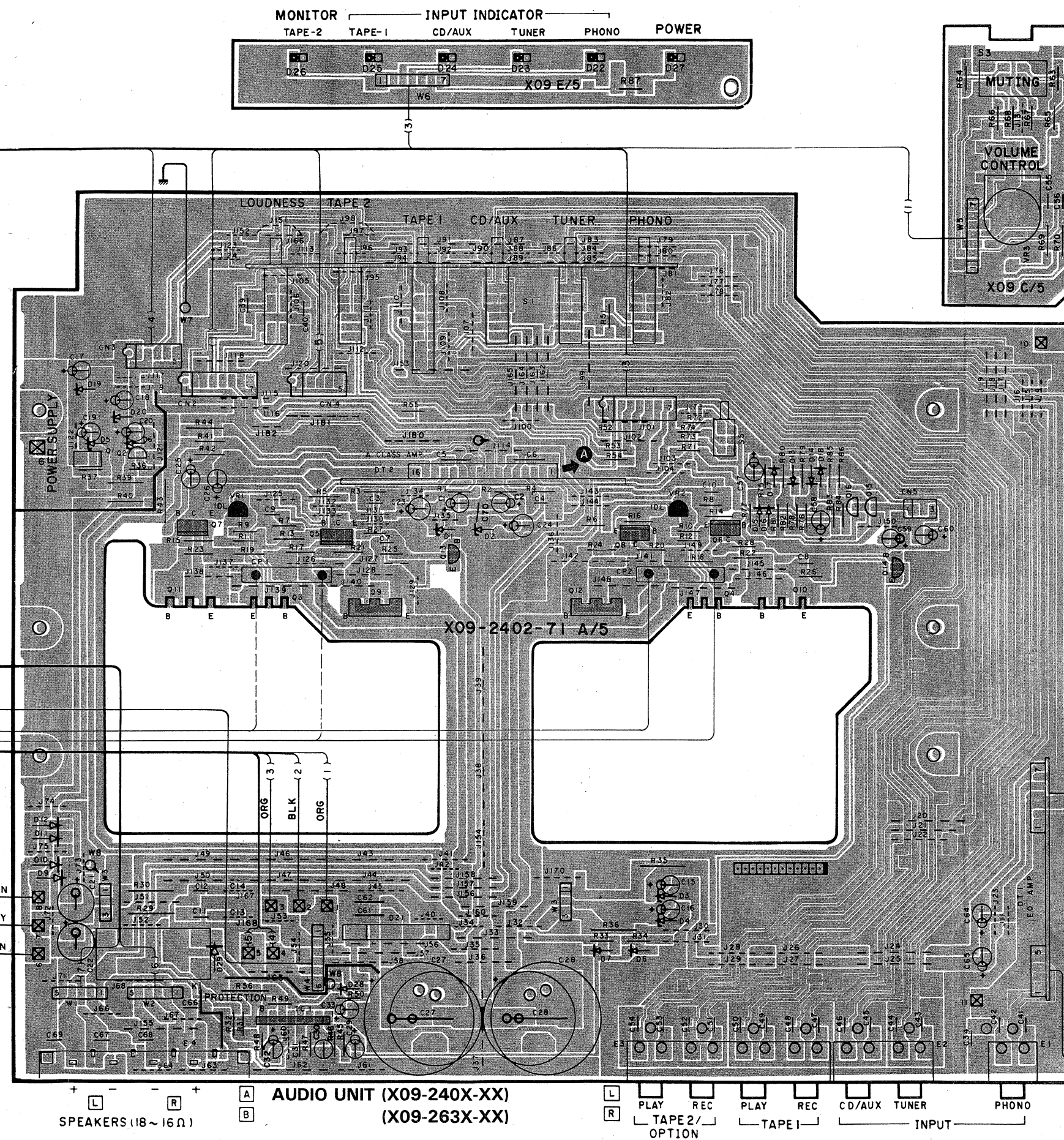
Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Other models) (Foil side view)



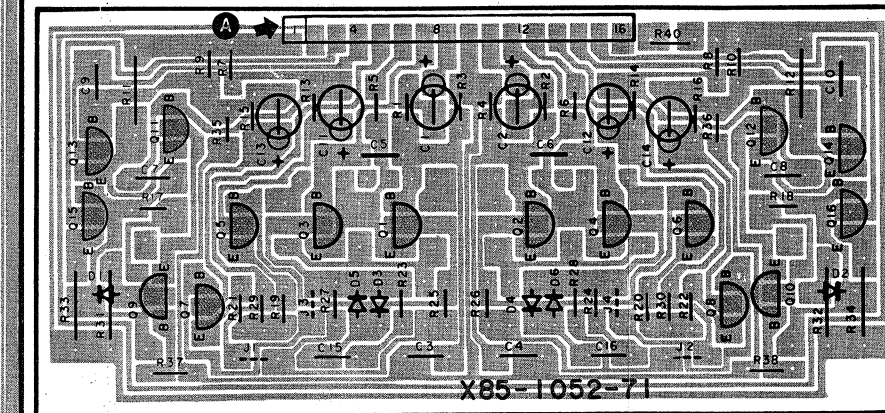
TONE UNIT (X11-2382-XX)



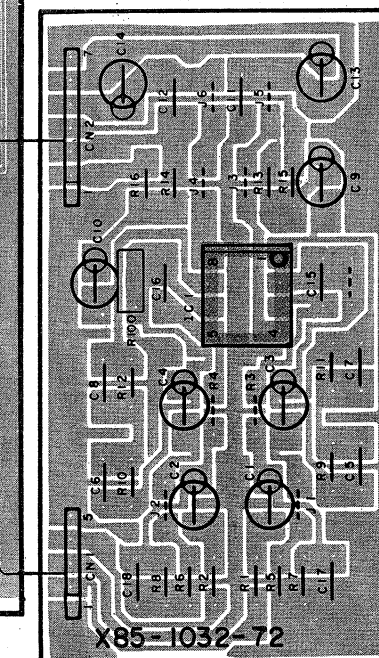


FRONT ↑

POWER AMPLIFIER UNIT (X85-105X-XX)



PREAMPLIFIER UNIT
(X85-103X-XX)
(X85-111X-XX)



Refer to the schematic diagram for the values of resistors and capacitors.

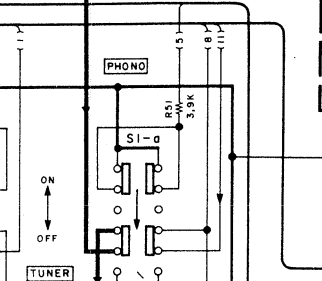
KA-87

X85-103K-XX)
X85-111K-XX)
C1: AN6556 or M5218P

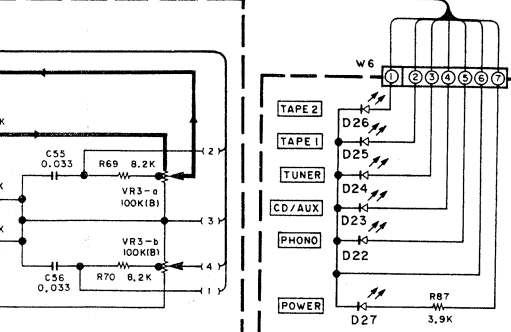
X85-105K-XX)
Q1-4 : 2SC1845(F,E)
Q5-8 : 2SA992(F,E)
Q9-14 : 2SC2632(Q,R,S)
Q15,16 : 2SA1124(Q,R,S)

Q1-6 : ISS176 or ISS133

DESTINATION	(X85-103K-XX)	(X85-111K-XX)
No.	E,X M	E,X M
R1,2	1K 100	1K 100
R3,4	100 J	100 J
R100	33 22	27 10
C15,16	2200P 560P	2200P 560P
C17,18	220P 100	220P 100P

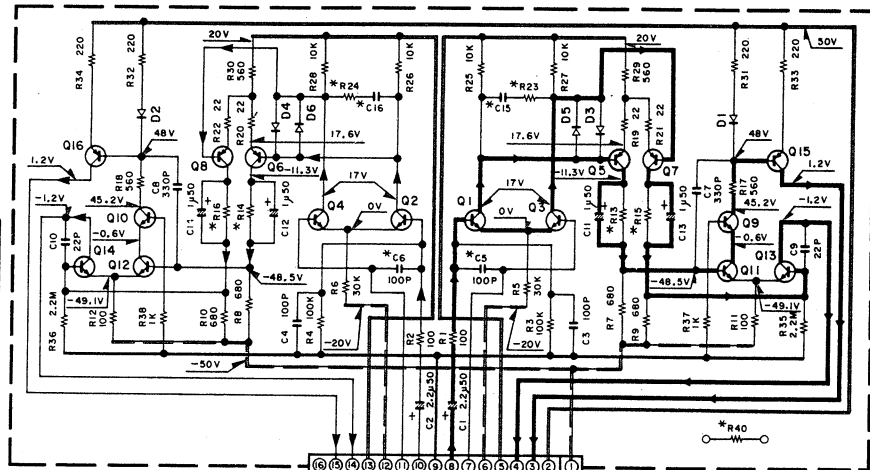


(X09-240X-XX) (C/5)
(X09-263X-XX) (C/5)



(X09-240X-XX) (E/5)
(X09-263X-XX) (E/5)

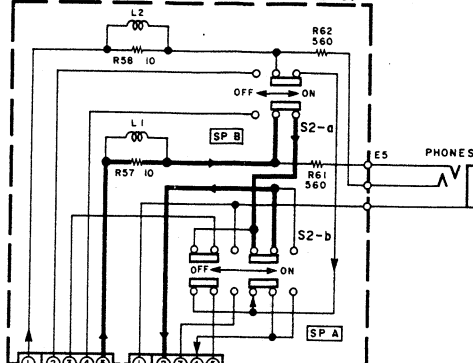
(X85-105X-XX)



(X85-105K-XX)

DESTINATION	No.	R13-16	R23	R24	R40	C5,6	C15,16
X,E	2-71(J,2-72(S))	8,2K	180	180	53	YES	2200P
M	0-11(J),0-13(S)	10K	91	91	10	NO	1500P

(X09-240X-XX) (X09-263X-XX) (B/5)



(X09-240K-XX)
(X09-263K-XX)
IC1

μPC1237HA

Q3,4 : 2SC3419(Y)
Q5,6 : 2SC3944(R,Q,S)
Q7,8 : 2SA1535(R,Q,S)
Q9,10 : 2SD1718 or 2SD1717
Q11,12 : 2SB1163 or 2SB1162
Q13,14 : 2SA733(A)(Q,P)

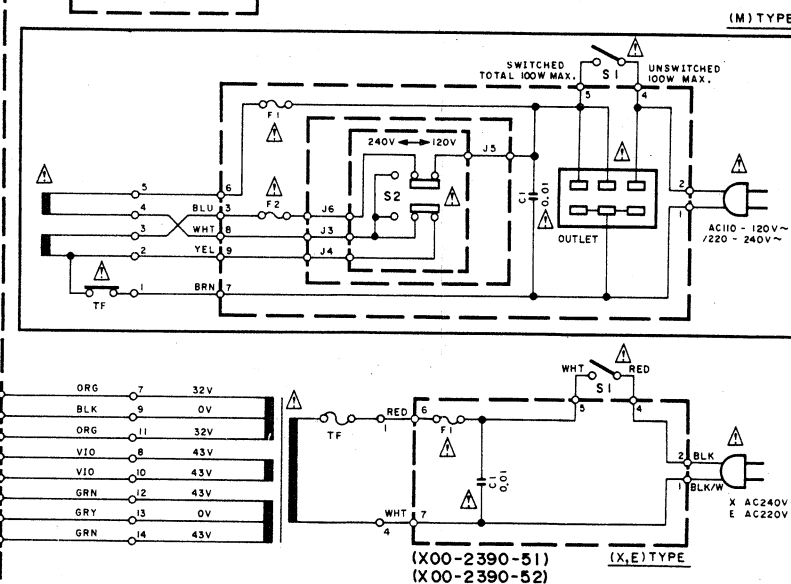
D1,2 : RD20ES(B) or HZS20S(B)
D3,4,19,20 : RD16ES(B) or HZS16S(B)
D7,8,28,29 : ISS133 or ISS176
D9-12 : DSM1A1
D21 : RBV-602LFA
D22-27 : B30-0431-05

DESTINATION	No.	a	b	c	d
X,E,T	2-71	45V (33V)	1.8V	60V (44V)	-60V (-44V)
M	0-21	48V (35V)	2.7V	67V (47V)	-67V (-47V)

DESTINATION	No.	R1,2	R43	R44	C27,28	C41-54	C66-70
X,E	2-71	560 1.8K	3.3K	7500μ71	YES	YES	YES
M	0-21	510 2.7K	4.7K	8200μ71	NO	NO	NO

	JAPAN MADE		SINGAPOLE MADE	
	E,X	M	E,X	M
(X00-239K-XX)	0-51	0-81	0-52	0-83
(X09-240K-XX)	2-71	0-21	NO	NO
(X09-263K-XX)	NO	NO	2-71	0-21
(X11-238K-XX)	2-70	2-70	2-71	2-71
(X85-103K-XX)	2-72	0-11	NO	NO
(X85-111K-XX)	NO	NO	2-71	0-10
(X85-105K-XX)	2-71	0-11	2-72	0-13

SIGNAL LINE
GND LINE
+B LINE
-B LINE



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

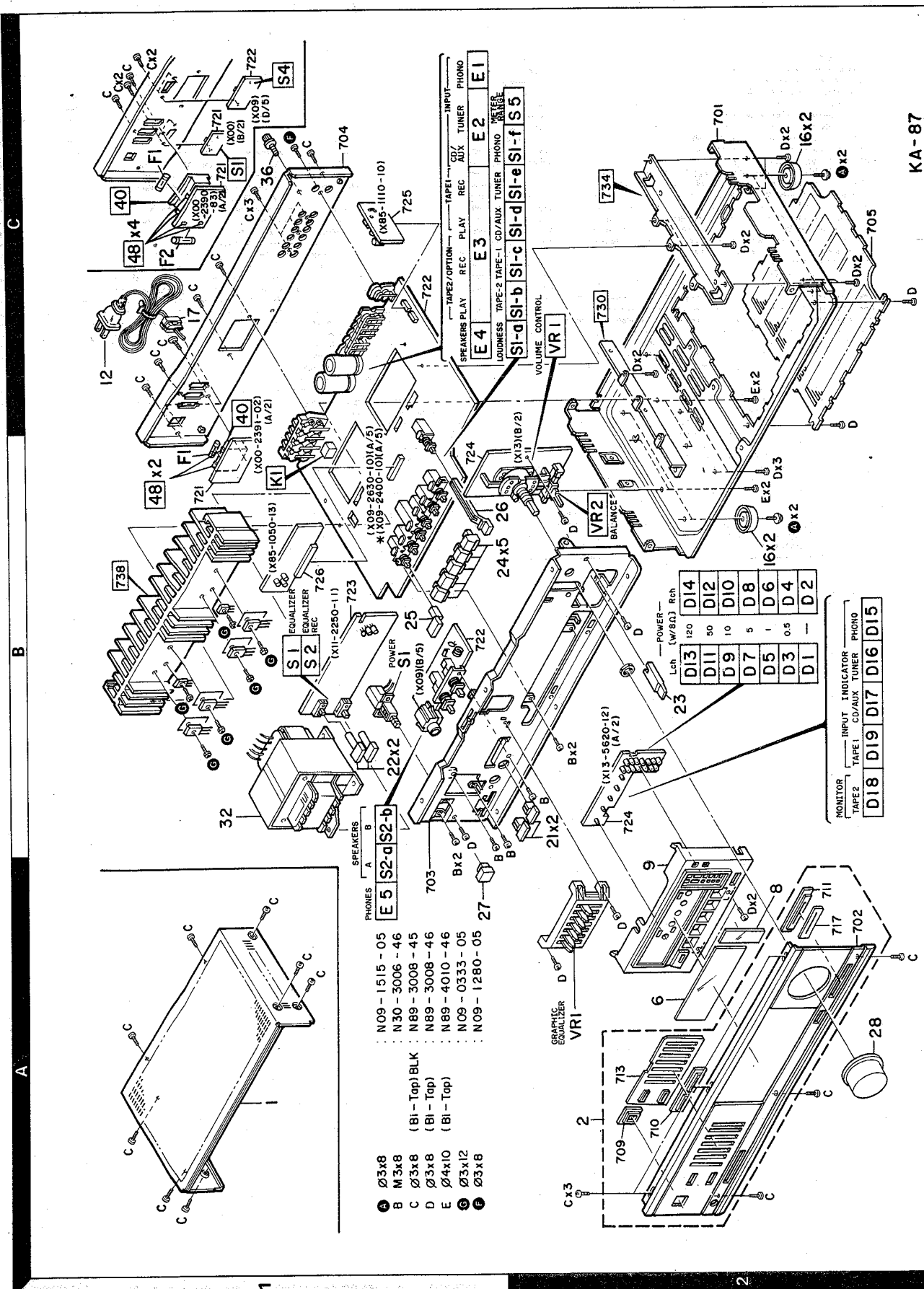
Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

Built-in tone controls

KA-87
KENWOOD

EXPLODED VIEW (U.S.A. and Canada models)

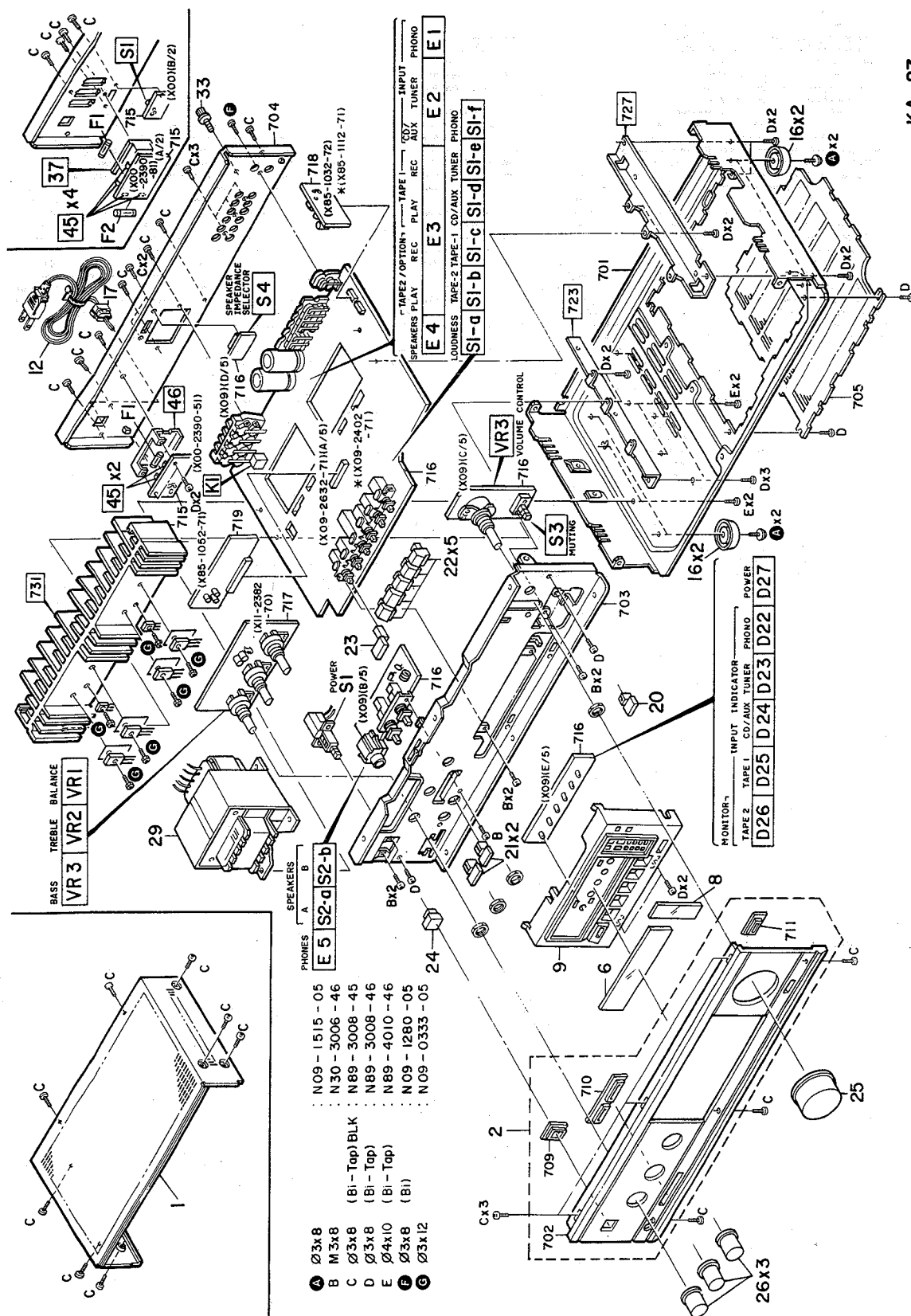


Parts with the exploded numbers larger than 700 are not supplied.

KA-87

EXPLODED VIEW (Other models)

KA-87



Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST (U.S.A. and Canada models)

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
KA-87 (Built-in graphic equalizer)						
1	1A		A01-1481-02	METALLIC CABINET		
2	2A	*	A20-5461-02	PANEL ASSY		
6	2A	*	B03-2402-04	DRESSING PLATE (INPUT INDICATOR)		
8	2A	*	B03-2403-04	DRESSING PLATE (METER)		
9	2A		B07-1721-02	ESCUTCHEON		
			B46-0092-03	WARRANTY CARD		K
			B46-0094-03	WARRANTY CARD		UUE
			B46-0095-03	WARRANTY CARD		UUE
			B46-0121-03	WARRANTY CARD		P
		*	B50-8689-00	INSTRUCTION MANUAL (ENGLISH)		P
		*	B50-9000-00	INSTRUCTION MANUAL (FRENCH)		U
			B58-0223-04	CAUTION CARD (PRE-SET 120V)		
			B58-0513-04	CAUTION CARD (PRESET 220-240)		UUE
			B59-0092-00	SERVICE DIRECTORY		UUE
△ 12	1C		E30-0812-05	AC POWER CORD		UUE
△ 12	1C		E30-2209-05	AC POWER CORD		KP
△ F1	1B		F05-6027-05	FUSE (UL) (250V 6A)		KP
△ F1 2	1C		F05-3022-05	FUSE (250V 3A)		UUE
		*	H01-7757-04	ITEM CARTON CASE		
		*	H10-3574-02	POLYSTYRENE FOAMED FIXTURE		
		*	H11-0015-04	POLYSTYRENE FOAMED BOARD		
			H25-0223-04	PROTECTION BAG (750X350X0.03)		
			H25-0232-04	PROTECTION BAG (235X350X0.03)		
△ 16	2B		J02-0170-04	FOOT		
△ 17	1C		J42-0083-05	POWER CORD BUSHING		
			J61-0307-05	WIRE BAND		
21	2B		K27-0742-14	KNOB (BUTTON) SPEAKER, A-B		
22	1B		K27-1638-04	KNOB (BUTTON) GE, GE, REC		
23	2B		K27-1639-04	KNOB (BUTTON) BALANCE		
24	1B		K27-1722-04	KNOB (BUTTON) TAPE		
25	1B		K27-1723-04	KNOB (BUTTON) LOUDNESS		
26	1B		K27-1724-04	KNOB (BUTTON) METER RANGE		
27	1A		K29-2001-04	KNOB ASSY (BUTTON) POWER		
28	2A		K29-2020-04	KNOB (VOLUME CONTROL)		
△ 32	1B	*	L01-5181-05	POWER TRANSFORMER		KP
△ 32	1B		L01-7625-05	POWER TRANSFORMER		UUE
36	1C		N08-0128-35	BINDING POST (GND)		
A 2B, 2C			N09-1515-05	TAPPING SCREW (Ø3X8)		
F 1C			N09-1280-05	TAPTITE SCREW (Ø3X8)		
VR1	2A		R29-5006-05	POTENTIOMETER (G. E)		
△ S1	1B		S40-1073-05	PUSH SWITCH (POWER)		
KA-87 (SINGAPORE MADE)						
1	1A		A01-1481-02	METALLIC CABINET		
2	2A	*	A20-5461-02	PANEL ASSY		
6	2A	*	B03-2402-04	DRESSING PLATE (INPUT INDICATOR)		
8	2A	*	B03-2403-04	DRESSING PLATE (METER)		
9	2A		B07-1721-02	ESCUTCHEON		
			B46-0092-03	WARRANTY CARD		K

E: Scandinavia & Europe K: USA P: Canada

U: PX (Far East, Hawaii) T: England M: Other Areas

UUE: AAFES (Europe) X: Australia

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PARTS LIST (U.S.A. and Canada models)

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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
-			B46-0094-03	WARRANTY CARD	UUE	
-			B46-0095-03	WARRANTY CARD	UUE	
-			B46-0121-03	WARRANTY CARD	P	
-		*	B50-8870-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B50-9001-00	INSTRUCTION MANUAL (FRENCH)	P	
-			B58-0223-04	CAUTION CARD (PRE-SET 120V)	U	
-			B58-0513-04	CAUTION CARD (PRESET 220-240)	UUE	
-			B59-0092-00	SERVICE DIRECTORY	UUE	
△ 12	1C		E30-0812-05	AC POWER CORD	UUE	
△ 12	1C		E30-0974-05	AC POWER CORD	KP	
△ F1	1B		F05-6027-05	FUSE (UL) (250V 6A)	KP	
△ F1 .2	1C		F05-3022-05	FUSE (250V 3A)	UUE	
-		*	H01-7839-04	ITEM CARTON CASE		
-			H10-3317-02	POLYSTYRENE FOAMED FIXTURE		
-			H11-0002-04	POLYSTYRENE FOAMED BOARD		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
△ 16	2B, 2C		J02-0170-04	FOOT		
△ 17	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
21	2B		K27-0742-14	KNOB (BUTTON) SPEAKERS		
22	1B		K27-1638-04	KNOB (BUTTON) EQ, EQ. REC		
23	2B		K27-1639-04	KNOB (BUTTON) BALANCE		
24	1B		K27-1722-04	KNOB (BUTTON) TAPE		
25	1B		K27-1723-04	KNOB (BUTTON) LOUDNESS		
26	1B		K27-1724-04	KNOB (BUTTON) METER RANGE		
27	1A		K29-2001-04	KNOB ASSY (BUTTON) POWER		
28	2A		K29-2020-04	KNOB (VOLUME CONTROL)		
△ 32	1B		L01-7621-05	POWER TRANSFORMER	KP	
△ 32	1B		L01-7625-05	POWER TRANSFORMER	UUE	
36	1C		N08-0128-35	BINDING POST (GND)		
A	2B, 2C		N09-1515-05	TAPPING SCREW (Ø3X8)		
F	1C		N09-1280-05	TAPTITE SCREW (Ø3X8)		
VR1	2A		R29-5006-05	POTENTIOMETER (G. E)		
△ S1	1B		S40-1073-05	PUSH SWITCH (POWER)		
POWER SUPPLY UNIT (X00-2390-83)						
△ C1			C91-0023-05	CERAMIC 0.01UF AC250V	UUE	
△ C1			C91-0647-05	CERAMIC 0.01UF P	KP	
△ 40	1C	*	E03-0077-05	AC OUTLET	UUE	
△ 40	1C	*	E03-0078-05	AC OUTLET	KP	
48	1B, 1C		J13-0041-05	FUSE CLIP		
△ S1	1B		S31-2126-05	SLIDE SWITCH (POWER TYPE)	UUE	
AUDIO UNIT: S (X09-2400-10)						
C1 .2			CE04KW1A101M	ELECTRON 100UF 10WV		
C3 .4			CC45FSL1H100D	CERAMIC 10PF D		
C5 .6			C91-0717-05	CERAMIC 4.7PF K		
C7 -10			CF92FV1H103J	MF 0.010UF J		
C11 -14			CF92FV1H333J	MF 0.033UF J		

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
C15 -20			CE04KW1E470M	ELECTRO 47UF 25WV		
C21 ,22			CE04KW1V471M	ELECTRO 470UF 35WV		
C23 ,24			CE04KW1E101M	ELECTRO 100UF 25WV		
C25 ,26		*	CE04KW2AR22M	ELECTRO 0.22UF 100WV		
C27 ,28		*	C90-1496-05	ELECTRO 8200UF 71WV		
C29			CE04KW1C220M	ELECTRO 22UF 16WV		
C30			C90-1334-05	NP-ELEC 47UF 10WV		
C31			CF92FV1H223J	MF 0.022UF J		
C32			CE04KW1C470M	ELECTRO 47UF 16WV		
C33			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C34			CF92FV1H223J	MF 0.022UF J		
C39 ,40			CF92FV1H473J	MF 0.047UF J		
C57 ,58			CE04KW1HR22M	ELECTRO 0.22UF 50WV		
C59 ,60			CE04KW1V100M	ELECTRO 10UF 35WV		
C61 ,62			CK45FE2H103P	CERAMIC 0.010UF P		
C64 ,65			CE04KW1H010M	ELECTRO 1.0UF 50WV		
E1	1C		E13-0235-05	PHONE JACK(2P) PHONE		
E2	1C		E13-0497-05	PHONE JACK(4P) TUNER,CD/AUX		
E3	1C		E13-0814-05	PHONE JACK(8P) TAPE		
E4	1C		E20-0823-05	LOCK TERMINAL BOARD(8P)SPEAKER		
E5	1A		E11-0162-05	PHONE JACK(3P) PHONES		
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
G	1B		ND9-0333-05	TAPPING SCREW (Ø3X12)		
△ CP1 ,2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R13 ,14			RD14AB2E220J	FL-PROOF RD 22 J 1/4W		
R15			RD14GB2E220J	FL-PROOF RD 22 J 1/4W		
R16			RD14AB2E220J	FL-PROOF RD 22 J 1/4W		
R17 -20			RD14AB2E331J	FL-PROOF RD 330 J 1/4W		
R21 -24			RD14AB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R29 ,30			RS14DB3D100J	FL-PROOF RS 10 J 2W		
R35 ,36			RS14KB3A102J	FL-PROOF RS 1.0K J 1W		
R39			RS14DB3A820J	FL-PROOF RS 82 J 1W		
R40			RS14DB3A181J	FL-PROOF RS 180 J 1W		
R41 ,42			RD14GB2E470J	FL-PROOF RD 47 J 1/4W		
R43			RS14KB3D272J	FL-PROOF RS 2.7K J 2W		
R44			RS14KB3A472J	FL-PROOF RS 4.7K J 1W		
R56			RS14DB3D221J	FL-PROOF RS 220 J 2W		
R57			RS14KB3A100J	FL-PROOF RS 10 J 1W		
R58			RS14DB3A100J	FL-PROOF RS 10 J 1W		
R61 ,62			RS14DB3D561J	FL-PROOF RS 560 J 2W		
VR1 ,2			R12-1066-05	TRIMMING POT. (1K) IDLE CURRENT		
K1	1B		S51-2078-05	MAGNETIC RELAY		
S1	2C		S42-6021-05	MULTIPLE PUSH SWITCH(LOUDNESS)		
S2	1A, 1B	*	S42-2153-05	MULTIPLE PUSH SWITCH(SPEAKERS)		
△ S4	1C		S31-2127-05	SLIDE SWITCH (SPEAKERS)	UUE	
S5	2C		S40-2193-05	PUSH SWITCH (METER RANGE)		
D1 ,2			HZS20S(B)	ZENER DIODE		
D1 ,2			RD20ES(B)	ZENER DIODE		
D3 -6		*	HZS16S(B)	ZENER DIODE		
D3 -6			RD16ES(B)	ZENER DIODE		
D7 ,8			1SS133	DIODE		
D7 ,8			1SS176	DIODE		

E: Scandinavia & Europe K: USA P: Canada

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PARTS LIST (U.S.A. and Canada models)

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
△ D9 -12			DSM1A1	DIODE		
D13 -18			1SS133	DIODE		
D13 -18			1SS176	DIODE		
△ D21			RBV-602LFA	DIODE		
D28 ,29			1SS133	DIODE		
D28 ,29			1SS176	DIODE		
IC1			UPC1237HA	IC (POWER AMP)		
Q1			2SD882	TRANSISTOR		
Q2			2SA954(L,K)	TRANSISTOR		
Q3 ,4			2SC3419(Y)	TRANSISTOR		
Q5 ,6			2SC3944(Q,R,S)	TRANSISTOR		
Q7 ,8			2SA1535(Q,R,S)	TRANSISTOR		
Q9 ,10		*	2SD1718	TRANSISTOR		
Q11 ,12		*	2SB1163	TRANSISTOR		
Q13 ,14			2SA733(A)(Q,P)	TRANSISTOR		
Q15 ,16			2SC945(A)(Q,P)	TRANSISTOR		
AUDIO UNIT (X09-2630-10)						
C1 ,2			CE04LW1A101M	ELECTRO 100UF 10WV		
C3 ,4			CC45FSL1H100D	CERAMIC 10PF D		
C5 ,6			C91-0717-05	CERAMIC 4.7PF K		
C7 -10			CF92FV1H103J	MF 0.010UF J		
C11 -14			CF92FV1H333J	MF 0.033UF J		
C15 -20		*	CE04LW1E470M	ELECTRO 47UF 25WV		
C21 ,22		*	CE04LW1V471M	ELECTRO 470UF 35WV		
C23 ,24		*	CE04LW1E101M	ELECTRO 100UF 25WV		
C25 ,26		*	CE04LW2AR22M	ELECTRO 0.22UF 100WV		
C27 ,28			C90-1496-05	ELECTRO 8200UF 71WV		
C29			CE04LW1C220M	ELECTRO 22UF 16WV		
C30			C90-1334-05	NP-ELEC 47UF 10WV		
C31			CF92FV1H223J	MF 0.022UF J		
C32			CE04LW1C470M	ELECTRO 47UF 16WV		
C33			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C34			CF92FV1H223J	MF 0.022UF J		
C39 ,40			CF92FV1H473J	MF 0.047UF J		
C57 ,58			CE04LW1HR22M	ELECTRO 0.22UF 50WV		
C59 ,60		*	CE04LW1V100M	ELECTRO 10UF 35WV		
C61 ,62			CK45FE2H103P	CERAMIC 0.010UF P		
C64 ,65			CE04LW1H010M	ELECTRO 1.0UF 50WV		
E1	1C		E13-0235-05	PHONE JACK(2P) PHONE		
E2	1C		E13-0497-05	PHONE JACK(4P) TUNER,CD/AUX		
E3	1C		E13-0814-05	PHONE JACK(8P) TAPE		
E4	1C		E20-0823-05	LOCK TERMINAL BOARD(8P)SPEAKER		
E5	1A		E11-0162-05	PHONE JACK(3P) PHONES		
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
G	1B		N09-0333-05	TAPPING SCREW (Ø3X12)		
△ CP1 ,2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R13 -16			RD14GB2E220J	FL-PROOF RD 22 J 1/4W		
R17 -20			RD14GB2E331J	FL-PROOF RD 330 J 1/4W		
R21 -24			RD14GB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R29 ,30			RS14KB3D100J	FL-PROOF RS 10 J 2W		
R35 ,36			RS14KB3A102J	FL-PROOF RS 1.0K J 1W		
R39			RS14KB3A820J	FL-PROOF RS 82 J 1W		

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R40 R41 ,42 R43 R44 R56			RS14KB3A181J RD14GB2E470J RS14KB3D272J RS14KB3A472J RS14KB3D221J	FL-PROOF RS 180 J 1W FL-PROOF RD 47 J 1/4W FL-PROOF RS 2.7K J 2W FL-PROOF RS 4.7K J 1W FL-PROOF RS 220 J 2W		
R57 ,58 R61 ,62 VR1 ,2			RS14KB3A100J RS14KB3D561J R12-1066-05	FL-PROOF RS 10 J 1W FL-PROOF RS 560 J 2W TRIMMING PGT. (1K) IDLE CURRENT		
K1 S1 S2 S4 S5	1C 2C 1A, 1B 1C 2C		S51-2078-05 S42-6021-05 S42-2153-05 S31-2113-05 S40-2193-05	MAGNETIC RELAY MULTIPLE PUSH SWITCH (LOUDNESS) MULTIPLE PUSH SWITCH (SPEAKERS) SLIDE SWITCH (SPEAKER) PUSH SWITCH (METER RANGE)	UUE	
D1 ,2 D1 ,2 D3 -6 D3 -6 D7 ,8			HZS20S(B) RD20ES(B) HZS16S(B) RD16ES(B) 1SS133	ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE DIODE		
D7 ,8 D9 -12 D13 -18 D13 -18 D21			1SS176 DSM1A1 1SS133 1SS176 RBV-602LFA	DIODE DIODE DIODE DIODE DIODE		
D28 ,29 D28 ,29 IC1 Q1 Q2			1SS133 1SS176 UPC1237HA 2SD882(Q,P,E) 2SA954(L,K)	DIODE DIODE IC (POWER AMP) TRANSISTOR TRANSISTOR		
Q3 ,4 Q5 ,6 Q7 ,8 Q9 ,10 Q11 ,12		*	2SC3419(Y) 2SC3944(Q,R,S) 2SA1535(Q,R,S) 2SD1718 2SB1163	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q13 ,14 Q15 ,16			2SA733(A) (Q,P) 2SC945(A) (Q,P)	TRANSISTOR TRANSISTOR		
TONE UNIT (X11-2250-11)						
C1 ,2 C1 ,2 C3 -6 C7 ,8 C7 ,8			CE04KW1H3R3M CE04LW1H3R3M CK45FB1H561K CE04KW1H2R2M CE04LW1H2R2M	ELECTRO 3.3UF 50WV ELECTRO 3.3UF 50WV CERAMIC 560PF K ELECTRO 2.2UF 50WV ELECTRO 2.2UF 50WV		J S J S
C9 ,10 C9 ,10 C11 ,12 C11 ,12 C13 ,14			CE04KW1HOR1M CE04LW1HOR1M CE04KW1HR47M CE04LW1HR47M CE04KW1HOR1M	ELECTRO 0.1UF 50WV ELECTRO 0.1UF 50WV ELECTRO 0.47UF 50WV ELECTRO 0.47UF 50WV ELECTRO 0.1UF 50WV		J S J S J
C13 ,14 C15 ,16 C15 ,16 C17 ,18 C17 ,18			CE04LW1HOR1M CE04KW1HR22M CE04LW1HR22M CF92FV1H303J CF92FV1H303J	ELECTRO 0.1UF 50WV ELECTRO 0.22UF 50WV ELECTRO 0.22UF 50WV MF 0.030UF J MF 0.030UF J		S J J S S
C19 ,20 C21 ,22 C23 ,24			CF92FV1H823J CF92FV1H123J CF92FV1H333J	MF 0.082UF J MF 0.012UF J MF 0.033UF J		

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C25 ,26 C27 ,28 C29 ,30 C31 ,32 C33 ,34		*	CF92FV1H512J CF92FV1H133J CF92FV1H202J CF92FV1H472J CK45FB1H821K	MF 5100PF J MF 0.013UF J MF 2000PF J MF 4700PF J CERAMIC 820PF K		
C35 ,36 C35 ,36			CE04KW1H3R3M CE04LW1H3R3M	ELECTRO 3.3UF 50WV ELECTRO 3.3UF 50WV		J S
S1 ,2 IC1 ,2	1B	*	S40-2351-05 M5229P	PUSH SWITCH (EQ, EQ REC) IC (7CH GRAPHIC EQUALIZER)		
SUB-CIRCUIT UNIT (X13-5620-12)						
D1 -19 C1 ,2 VR1 VR2	2B 2C 2B		B30-0431-05 CF92FV1H333J R06-5151-05 R13-5080-05	LED (LN21CPH) MF 0.033UF J POTENTIOMETER (100KB) VOL CONT POTENTIOMETER (200KG) BALANCE		
Q1 ,2 Q1 ,2			2SA937F 2SA937F (R,S)	TRANSISTOR TRANSISTOR		J S
PREAMPLIFIER UNIT: S (X85-1030-11)						
C1 ,2 C3 ,4 C5 C6 C7			CE04FW1C100M CE04FW1A470M CF92FV1H123J CF92FV1H123J CF92FV1H332J	ELECTRO 10UF 16WV ELECTRO 47UF 10WV MF 0.012UF J MF 0.012UF J MF 3300PF J		
C8 C9 ,10 C11 ,12 C15 ,16 C17 ,18			CF92FV1H332J CE04KW1V100M CK45FF1H103Z CK45FB1H561K CK45FSL1H101J	MF 3300PF J ELECTRO 10UF 35WV CERAMIC 0.010UF Z CERAMIC 560PF K CERAMIC 100PF J		
IC1 IC1			AN6556 M5218P	IC (OP AMP X2) IC (OP AMP X2)		
POWER AMPLIFIER UNIT (X85-1050-11)						
C1 ,2 C1 ,2 C3 ,4 C7 ,8 C9 ,10			CE04FW1H2R2MEL CE04LW1H2R2M CK45FSL1H101J CK45FSL1H331J CK45FSL1H220J	ELECTRO 2.2UF 50WV ELECTRO 2.2UF 50WV CERAMIC 100PF J CERAMIC 330PF J CERAMIC 22PF J		J S J S
C11 -14 C11 -14 C15 ,16			CE04FW1H010MEL CE04LW1H010M CK45FB1H152K	ELECTRO 1.0UF 50WV ELECTRO 1.0UF 50WV CERAMIC 1500PF K		J S J S
R11 ,12 R11 ,12 R31 -34 R31 -34			RD14AB2E101JTS RD14GB2E101J RD14AB2E221JTS RD14GB2E221J	FL-PROOF RD 100 J 1/4W FL-PROOF RD 100 J 1/4W FL-PROOF RD 220 J 1/4W FL-PROOF RD 220 J 1/4W		J S J S
D1 -6 D1 -6 Q1 -4 Q5 -8 Q9 -14			1SS133 1SS176 2SC1845(F,E) 2SA992(F,E) 2SC2632(Q,R,S)	DIODE DIODE TRANSISTOR TRANSISTOR TRANSISTOR		
Q15 ,16			2SA1124(Q,R,S)	TRANSISTOR		

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PREAMPLIFIER UNIT: J (X85-1110-10)						
C1 .2		*	CE04LW1C100M	ELECTR0 10UF 16WV		
C3 .4			CE04LW1A470M	ELECTR0 47UF 10WV		
C5 .6			CF92FV1H123J	MF 0.012UF J		
C7			CF92FV1H332J	MF 3300PF J		
C8			CF92FV1H332J	MF 3300PF J		
C9 .10			CE04LW1V100M	ELECTR0 10UF 35WV		
C11 .12			CK45FF1H103Z	CERAMIC 0.010UF Z		
C15 .16			CK45FB1H561K	CERAMIC 560PF K		
C17 .18			CC45FSL1H101J	CERAMIC 100PF J		
IC1			AN6556	IC(OP AMP X2)		
IC1			M5218P	IC(OP AMP X2)		

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KA-87 (Built-in tone controls)						
1	1A		A01-1481-02	METALLIC CABINET		
2	2A	*	A20-5467-02	PANEL ASSY		
6	2A	*	B03-2402-04	DRESSING PLATE (INPUT INSCATOR)		
8	2B	*	B03-2413-04	DRESSING PLATE (POWER)		
9	2A		B07-1721-02	ESCUTCHEON		
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0122-13	WARRANTY CARD	E	
-		*	B50-8697-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B50-8698-00	INSTRUCTION MANUAL (FRENCH)		
-		*	B50-8699-00	INSTRUCTION MANUAL (G.D.I)	E	
-		*	B50-8700-00	INSTRUCTION MANUAL (SPANISH)	M	
-		*	B50-8701-00	INSTRUCTION MANUAL (ARABIC)	M	
-			B58-0803-13	CAUTION CARD	E	
Δ 12	1C		E30-0459-05	AC POWER CORD	E	
Δ 12	1C		E30-0812-05	AC POWER CORD	M	
Δ 12	1C		E30-1341-05	AC POWER CORD	X	
Δ F1	1C		F05-3121-05	FUSE (SEMKG) (250V T3.15A)	EX	
Δ F1 ,2	1C		F05-3022-05	FUSE (250V 3A)	M	
-			H01-7757-04	ITEM CARTON CASE		
-			H10-3574-02	POLYSTYRENE FOAMED FIXTURE		
-			H11-0015-04	POLYSTYRENE FOAMED BOARD		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
Δ 16	2B,2C		J02-0170-04	FOOT		
Δ 17	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
20	2B		K27-1725-04	KNOB (BUTTON) MUTING		
21	2B		K27-0742-14	KNOB (BUTTON) SPEAKER, A-B		
22	1B		K27-1722-04	KNOB (BUTTON) INPUT SEL		
23	1B		K27-1723-04	KNOB (BUTTON) LOUDNESS		
24	1A		K29-2001-04	KNOB ASSY (BUTTON) POWER		
25	2A		K29-2020-04	KNOB (MAIN VOL)		
26	2A		K29-2639-04	KNOB (TONE)		
Δ 29	1B	*	L01-5182-05	POWER TRANSFORMER	X	
Δ 29	1B	*	L01-5187-05	POWER TRANSFORMER	E	
Δ 29	1B		L01-7625-05	POWER TRANSFORMER	M	
30	1C		N08-0128-35	BINDING POST (GND)		
A	2B,2C		N09-1515-05	TAPPING SCREW (Ø3X8)		
F	1C		N09-1280-05	TAPTITE SCREW (Ø3X8)		
Δ S1	1B		S40-1073-05	PUSH SWITCH		
KA-87 (SINGAPORE MADE)						
1	1A		A01-1481-02	METALLIC CABINET		
2	2A	*	A20-5467-02	PANEL ASSY		
6	2A	*	B03-2402-04	DRESSING PLATE (INPUT INDI.)		
8	2B	*	B03-2413-04	DRESSING PLATE (POWER)		
9	2A		B07-1721-02	ESCUTCHEON		
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0122-13	WARRANTY CARD	E	

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-		*	B50-8872-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B50-8873-00	INSTRUCTION MANUAL (FRENCH)		
-		*	B50-8874-00	INSTRUCTION MANUAL (G.D.I)	E	
-		*	B50-8875-00	INSTRUCTION MANUAL (SPANISH)	M	
-		*	B50-8876-00	INSTRUCTION MANUAL (ARABIC)	M	
-			B58-0803-13	CAUTION CARD	E	
Δ 12	1C		E30-0459-05	AC POWER CORD	E	
Δ 12	1C		E30-0812-05	AC POWER CORD	M	
Δ 12	1C		E30-1341-05	AC POWER CORD	X	
Δ F1	1C		F05-3121-05	FUSE (SEMKG) (250V T3.15A)	EX	
Δ F1 ,2	1C		F05-3022-05	FUSE (250V 3A)	M	
-		*	H01-7839-04	ITEM CARTON CASE		
-			H10-3317-02	POLYSTYRENE FOAMED FIXTURE		
-			H11-0002-04	POLYSTYRENE FOAMED BOARD		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
Δ 16	2B,2C		J02-0170-04	FOOT		
Δ 17	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
20	2B		K27-1725-04	KNOB (BUTTON) MUTING		
21	2B		K27-0742-14	KNOB (BUTTON) SPEAKER, A-B		
22	1B		K27-1722-04	KNOB (BUTTON) INPUT SEL		
23	1B		K27-1723-04	KNOB (BUTTON) LOUDNESS		
24	1A		K29-2001-04	KNOB ASSY (BUTTON) POWER		
25	2A		K29-2020-04	KNOB (MAIN VOL)		
26	2A		K29-2639-04	KNOB (TONE)		
Δ 29	1B		L01-7622-05	POWER TRANSFORMER	X	
Δ 29	1B		L01-7625-05	POWER TRANSFORMER	M	
Δ 29	1B	*	L01-7627-15	POWER TRANSFORMER	E	
33	1C		N08-0128-35	BINDING POST (GND)		
A	2B,2C		N09-1515-05	TAPPING SCREW (Ø3X8)		
F	1C		N09-1280-05	TAPTITE SCREW (Ø3X8)		
Δ S1	1B		S40-1073-05	PUSH SWITCH (POWER)		
POWER SUPPLY UNIT (X00-2390-52)						
Δ C1			C91-0023-05	CERAMIC 0.01UF AC250V	M	
Δ C1			C91-0647-05	CERAMIC 0.01UF P	EX	
Δ 37	1C	*	E03-0077-05	AC OUTLET	M	
Δ 37	1C	*	E03-0078-05	AC OUTLET	M	
45	1C		J13-0041-05	FUSE CLIP	M	
45	1B		J13-0054-05	FUSE CLIP	EX	
45	1C	*	J21-3698-04	MOUNTING HARDWARE	EX	
Δ S1	1C		S31-2126-05	SLIDE SWITCH (POWER TYPE)	M	
AUDIO UNIT: S (X09-2400-21)						
D22 -27	2B		B30-0431-05	LED(LN21CPH) MONI, INPUT INDI		
C1 ,2			CE04KW1A101M	ELECTRO 100UF 10WV		
C3 ,4			CC45FSL1H100D	CERAMIC 10PF D		
C5 ,6			C91-0717-05	CERAMIC 4.7PF K		
C7 -10			CF92FV1H103J	MF 0.010UF J		
C11 -14			CF92FV1H333J	MF 0.033UF J		

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-		*	B50-8873-00	INSTRUCTION MANUAL (FRENCH)		
-		*	B50-8874-00	INSTRUCTION MANUAL (G.D.I)		
-		*	B50-8875-00	INSTRUCTION MANUAL (SPANISH)		
-		*	B50-8876-00	INSTRUCTION MANUAL (ARABIC)		
-			B58-0803-13	CAUTION CARD		
Δ 12	1C		E30-0459-05	AC POWER CORD	E	
Δ 12	1C		E30-0812-05	AC POWER CORD	M	
Δ 12	1C		E30-1341-05	AC POWER CORD	X	
Δ F1	1C		F05-3121-05	FUSE (SEMKO) (250V T3.15A)	EX	
Δ F1 .2	1C		F05-3022-05	FUSE (250V 3A)	M	
-		*	H01-7839-04	ITEM CARTON CASE		
-			H10-3317-02	POLYSTYRENE FOAMED FIXTURE		
-			H11-0002-04	POLYSTYRENE FOAMED BOARD		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
Δ 16	2B, 2C		J02-0170-04	FOOT		
Δ 17	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
20	2B		K27-1725-04	KNOB (BUTTON) MUTING		
21	2B		K27-0742-14	KNOB (BUTTON) SPEAKER, A-B		
22	1B		K27-1722-04	KNOB (BUTTON) INPUT SEL		
23	1B		K27-1723-04	KNOB (BUTTON) LOUDNESS		
24	1A		K29-2001-04	KNOB ASSY (BUTTON) POWER		
25	2A		K29-2020-04	KNOB (MAIN VOL)		
26	2A		K29-2639-04	KNOB (TONE)		
Δ 29	1B		L01-7622-05	POWER TRANSFORMER	X	
Δ 29	1B		L01-7625-05	POWER TRANSFORMER	M	
Δ 29	1B	*	L01-7627-15	POWER TRANSFORMER	E	
33	1C		N08-0128-35	BINDING POST (GND)		
A	2B, 2C		N09-1515-05	TAPPING SCREW (Ø3X8)		
F	1C		N09-1280-05	TAPTITE SCREW (Ø3X8)		
Δ S1	1B		S40-1073-05	PUSH SWITCH (POWER)		
POWER SUPPLY UNIT (X00-2390-52)						
Δ C1			C91-0023-05	CERAMIC 0.01UF AC250V	M	
Δ C1			C91-0647-05	CERAMIC 0.01UF P	EX	
Δ 37	1C	*	E03-0077-05	AC OUTLET	M	
Δ 37	1C	*	E03-0078-05	AC OUTLET	M	
45	1C		J13-0041-05	FUSE CLIP	M	
45	1B		J13-0054-05	FUSE CLIP	EX	
45	1C	*	J21-3698-04	MOUNTING HARDWARE	EX	
Δ S1	1C		S31-2126-05	SLIDE SWITCH (POWER TYPE)	M	
AUDIO UNIT: S (X09-2400-21)						
D22 -27	2B		B30-0431-05	LED(LN21CPH) MONI, INPUT INDI		
C1 .2			CE04KW1A101M	ELECTRO 100UF 10WV		
C3 .4			CC45FSL1H100D	CERAMIC 10PF D		
C5 .6			C91-0717-05	CERAMIC 4.7PF K		
C7 -10			CF92FV1H103J	MF 0.010UF J		
C11 -14			CF92FV1H333J	MF 0.033UF J		

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C15 -18			CE04KW1E470M	ELECTRO 47UF 25WV		
C21 .22			CE04KW1V331M	ELECTRO 330UF 35WV		
C23 .24			CE04KW1E101M	ELECTRO 100UF 25WV		
C25 .26		*	CE04KW2AR22M	ELECTRO 0.22UF 100WV		
C27 .28			C90-0567-05	ELECTRO 7500UF 71WV	EX	
C27 .28		*	C90-1496-05	ELECTRO 8200UF 71WV	M	
C29			CE04KW1C220M	ELECTRO 22UF 16WV		
C30			C90-1334-05	NP-ELEC 47UF 10WV		
C31			CF92FV1H223J	MF 0.022UF J		
C32			CE04KW1C470M	ELECTRO 47UF 16WV		
C33			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C34			CF92FV1H223J	MF 0.022UF J		
C39 .40			CF92FV1H473J	MF 0.047UF J		
C41 .42			CC45FSL1H121J	CERAMIC 120PF J	EX	
C43 -54			CK45FB1H561K	CERAMIC 560PF K	EX	
C55 .56			CF92FV1H333J	MF 0.033UF J		
C61 .62			CK45FE2H103P	CERAMIC 0.010UF P		
C64 .65			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C66 -69			CF92FV1H562J	MF 5600PF J	EX	
C70			CK45FF1H103Z	CERAMIC 0.010UF Z	EX	
E1	1C		E13-0235-05	PHONE JACK(2P) PHONE		
E2	1C		E13-0497-05	PHONE JACK(4P) TUNER, CD/AUX		
E3	1C		E13-0814-05	PHONE JACK(8P) TAPE		
E4	1C		E20-0823-05	LOCK TERMINAL BOARD(8P) SPRKRS		
E5	1A		E11-0162-05	PHONE JACK(3P) PHONES		
L1 .2			L39-0085-05	PHASE-COMPENSATION COIL		
G	1B		N09-0333-05	TAPPING SCREW (Ø3X12)		
Δ CP1 .2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R13 .14			RD14AB2E220J	FL-PROOF RD 22 J 1/4W		
R15			RD14GB2E220J	FL-PROOF RD 22 J 1/4W		
R16			RD14AB2E220J	FL-PROOF RD 22 J 1/4W		
R17 -20			RD14AB2E331J	FL-PROOF RD 330 J 1/4W		
R21 -24			RD14AB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R29 .30			RS14DB3D100J	FL-PROOF RS 10 J 2W		
R35 .36			RS14KB3A102J	FL-PROOF RS 1.0K J 1W		
R39 .40			RS14DB3A471J	FL-PROOF RS 470 J 1W		
R41 .42			RD14GB2E470J	FL-PROOF RD 47 J 1/4W		
R43			RS14KB3D182J	FL-PROOF RS 1.8K J 2W	EX	
R43			RS14KB3D272J	FL-PROOF RS 2.7K J 2W	M	
R44		*	RS14KB3A332J	FL-PROOF RS 3.3K J 1W	EX	
R44			RS14KB3A472J	FL-PROOF RS 4.7K J 1W	M	
R56			RS14DB3D221J	FL-PROOF RS 220 J 2W		
R57			RS14KB3A100J	FL-PROOF RS 10 J 1W		
R58			RS14DB3A100J	FL-PROOF RS 10 J 1W		
R61 .62			RS14DB3D561J	FL-PROOF RS 560 J 2W		
VR1 .2			R12-1066-05	TRIMMING POT. (1K) IDLE		
VR3			R06-5151-05	POTENTIOMETER (100K B) VOL CONT		
K1	1B		S51-2078-05	MAGNETIC RELAY		
S1	2C	*	S42-6021-05	MULTIPLE PUSH SWITCH (INPUT SEL)		
S2	1A, 1B	*	S42-2153-05	MULTIPLE PUSH SWITCH (SPEAKERS)		
S3	2B		S40-2351-05	PUSH SWITCH (MUTING)		
S4	1C		S31-2127-05	SLIDE SWITCH (POWER TYPE)		
D1 .2			HZS20S(B)	ZENER DIODE		

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D1 ,2 D3 ,4 D3 ,4 D7 ,8 D7 ,8		*	RD20ES(B) HZS16S(B) RD16ES(B) 1SS133 1SS176	ZENER DIODE ZENER DIODE ZENER DIODE DIODE DIODE		
△ D9 -12 D19 ,20 D19 ,20 D21 D28 ,29		*	DSM1A1 HZS16S(B) RD16ES(B) RBV-602LFA 1SS133	DIODE ZENER DIODE ZENER DIODE DIODE DIODE		
D28 ,29 IC1 Q3 ,4 Q5 ,6 Q7 ,8		*	1SS176 UPC1237HA 2SC3419(Y) 2SC3944(Q,R,S) 2SA1535(Q,R,S)	DIODE IC(POWER AMP) TRANSISTOR TRANSISTOR TRANSISTOR		
Q9 ,10 Q9 ,10 Q11 ,12 Q11 ,12 Q13 ,14		*	2SD1717 2SD1718 2SB1162 2SB1163 2SA733(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	EX M EX M	
AUDIO UNIT: J (X09-2630-21)						
D22 -27	2B		B30-0431-05	LED(LN21CPH) MONI, INPUT INDI		
C1 ,2 C3 ,4 C5 ,6 C7 -10 C11 -14			CE04LW1A101M CC45FSL1H100D C91-0717-05 CF92FV1H103J CF92FV1H333J	ELECTRO 100UF 10WV CERAMIC 10PF D CERAMIC 4.7PF K MF 0.010UF J MF 0.033UF J		
C15 -18 C21 ,22 C23 ,24 C25 ,26 C27 ,28		*	CE04LW1E470M CE04LW1V331M CE04LW1E101M CE04LW2AR22M C90-0567-05	ELECTRO 47UF 25WV ELECTRO 330UF 35WV ELECTRO 100UF 25WV ELECTRO 0.22UF 100WV ELECTRO 7500UF 71WV	EX	
C27 ,28 C29 C30 C31 C32			C90-1496-05 CE04LW1C220M C90-1334-05 CF92FV1H223J CE04LW1C470M	ELECTRO 8200UF 71WV ELECTRO 22UF 16WV NP-ELEC 47UF 10WV MF 0.022UF J ELECTRO 47UF 16WV	M	
C33 C34 C39 ,40 C41 ,42 C43 -54			CE04LW1V477M CF92FV1H223J CF92FV1H473J CC45FSL1H121J CK45FB1H561K	ELECTRO 4.7UF 35WV MF 0.022UF J MF 0.047UF J CERAMIC 120PF J CERAMIC 560PF K	EX EX	
C55 ,56 C61 ,62 C64 ,65 C66 -69 C70			CF92FV1H333J CK45FE2H103P CE04LW1H010M CF92FV1H562J CK45FF1H103Z	MF 0.033UF J CERAMIC 0.010UF P ELECTRO 1.0UF 50WV MF 5600PF J CERAMIC 0.010UF Z	EX EX	
E1 E2 E3 E4 E5	1C 1C 1C 1C 1A		E13-0235-05 E13-0497-05 E13-0814-05 E20-0823-05 E11-0162-05	PHONE JACK(2P) PHONO PHONE JACK(4P) TUNER, CD/AUX PHONE JACK(8P) TAPE LOCK TERMINAL BOARD(8P) SPRKRS PHONE JACK(3P) PHONES		
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		

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G	1B		N09-0333-05	TAPPING SCREW (/3X12)		
△ CP1 ,2 R13 -16 R17 -20 R21 -24 R29 ,30			R90-0187-05 RD14GB2E220J RD14GB2E331J RD14GB2E2R2J RS14KB3D100J	MULTI-COMP 0.22X2 K 5W FL-PROOF RD 22 J 1/4W FL-PROOF RD 330 J 1/4W FL-PROOF RD 2.2 J 1/4W FL-PROOF RS 10 J 2W		
R35 ,36 R39 ,40 R41 ,42 R43 R43			RS14KB3A102J RS14KB3A471J RD14GB2E470J RS14KB3D182J RS14KB3D272J	FL-PROOF RS 1.0K J 1W FL-PROOF RS 470 J 1W FL-PROOF RD 47 J 1/4W FL-PROOF RS 1.8K J 2W FL-PROOF RS 2.7K J 2W	EX M	
R44 R44 R56 R57 ,58 R61 ,62		*	RS14KB3A332J RS14KB3A472J RS14KB3D221J RS14KB3A100J RS14KB3D561J	FL-PROOF RS 3.3K J 1W FL-PROOF RS 4.7K J 1W FL-PROOF RS 220 J 2W FL-PROOF RS 10 J 1W FL-PROOF RS 560 J 2W	EX M	
VR1 ,2 VR3	2B		R12-1066-05 RD6-5151-05	TRIMMING PNT. (1K) IDLE POTENTIOMETER(100KB)VOL. CONT		
K1 S1 S2 S3 S4	1B 2C 1A, 1B 2B 1C		S51-2078-05 S42-6021-05 S42-2153-05 S40-2351-05 S31-2113-05	MAGNETIC RELAY MULTIPLE PUSH SWITCH(INPUT SEL MULTIPLE PUSH SWITCH(SPEAKERS) PUSH SWITCH (MUTING) SLIDE SWITCH		
D1 ,2 D1 ,2 D3 ,4 D3 ,4 D7 ,8			HZS20S(B) RD20ES(B) HZS16S(B) RD16ES(B) 1SS133	ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE DIODE		
D7 ,8 D9 -12 D19 ,20 D19 ,20 D21			1SS176 DSM1A1 HZS16S(B) RD16ES(B) RBV-602LFA	DIODE DIODE ZENER DIODE ZENER DIODE DIODE		
D28 ,29 D28 ,29 IC1 Q3 ,4 Q5 ,6			1SS133 1SS176 UPC1237HA 2SC3419(Y) 2SC3944(Q,R,S)	DIODE DIODE IC(POWER AMP) TRANSISTOR TRANSISTOR		
Q7 ,8 Q9 ,10 Q9 ,10 Q11 ,12 Q11 ,12		*	2SA1535(Q,R,S) 2SD1717 2SD1718 2SB1162 2SB1163	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	EX M EX M	
Q13 ,14			2SA733(A)(Q,P)	TRANSISTOR		
TONE UNIT (X11-2382-71)						
C1 ,2 C3 ,4 C3 ,4 C5 -8 C9			CK45FB1H471K CE04KW1V100M CE04LW1V100M CF92FV1H223J CE04KW1V100M	CERAMIC 470PF K ELECTRO 10UF 35WV ELECTRO 10UF 35WV MF 0.022UF J ELECTRO 10UF 35WV		J S J
C9 C10 C11 ,12			CE04LW1V100M CE04JW1V100M CE04KW1V100M	ELECTRO 10UF 35WV ELECTRO 10UF 35WV ELECTRO 10UF 35WV		S J

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C11 .12 C13 .16 C17 .18 C19 .20 C21			CE04LW1V100M CF92FV1H334J CC45FSL1H150J CK45FB1H681K CE04KW1H010M	ELECTR0 10UF 35WV MF 0.33UF J CERAMIC 15PF J CERAMIC 680PF K ELECTR0 1.0UF 50WV		S J
C21 C22 C23 .24 C23 .24			CE04LW1H010M CE04CW1H010M CE04KW1E470M CE04LW1E470M	ELECTR0 1.0UF 50WV ELECTR0 1.0UF 50WV ELECTR0 47UF 25WV ELECTR0 47UF 25WV		S J S
R27 .28 VR1 VR2 .3	1B 1B		RD14GB2E470J R06-5134-05 R06-3048-05	FL-PROOF RD 47 J 1/4W POTENTIOMETER(200K BH) BALANCE POTENTIOMETER(10K B) BASS, TREB		
IC1			UPC4570C	IC(OP AMP X2)		
PREAMPLIFIER UNIT: J (X85-1030-11)						
C1 .2 C3 .4 C5 .6 C7 C8			CE04FW1C100M CE04FW1A470M CF92FV1H123J CF92FV1H332J CF92FV1H332J	ELECTR0 10UF 16WV ELECTR0 47UF 10WV MF 0.012UF J MF 3300PF J MF 3300PF J		
C9 .10 C11 .12 C15 .16 C15 .16 C17 .18			CE04KW1V100M CK45FF1H103Z CK45FB1H222K CK45FB1H561K CC45FSL1H101J	ELECTR0 10UF 35WV CERAMIC 0.010UF Z CERAMIC 2200PF K CERAMIC 560PF K CERAMIC 100PF J	EX M M	
C17 .18 IC1 IC1			CC45FSL1H221J AN6556 M5218P	CERAMIC 220PF J IC(OP AMP X2) IC(OP AMP X2)	EX	
POWER AMPLIFIER UNIT (X85-1052-71)						
C1 .2 C1 .2 C3 .6 C3 .4 C7 .8			CE04FW1H2R2MEL CE04LW1H2R2M CC45FSL1H101J CC45FSL1H101J CC45FSL1H331J	ELECTR0 2.2UF 50WV ELECTR0 2.2UF 50WV CERAMIC 100PF J CERAMIC 100PF J CERAMIC 330PF J	EX M	J S
C9 .10 C11 .14 C11 .14 C15 .16 C15 .16			CC45FSL1H220J CE04FW1H010MEL CE04LW1H010M CK45FB1H152K CK45FB1H222K	CERAMIC 22PF J ELECTR0 1.0UF 50WV ELECTR0 1.0UF 50WV CERAMIC 1500PF K CERAMIC 2200PF K	M EX	J S
R11 .12 R11 .12 R31 .34 R31 .34			RD14AB2E101JTS RD14GB2E101J RD14AB2E221JTS RD14GB2E221J	FL-PROOF RD 100 J 1/4W FL-PROOF RD 100 J 1/4W FL-PROOF RD 220 J 1/4W FL-PROOF RD 220 J 1/4W		J S J S
D1 .6 D1 .6 Q1 .4 Q5 .8 Q9 .14			1SS133 1SS176 2SC1845(F,E) 2SA992(F,E) 2SC2632(Q,R,S)	DIODE DIODE TRANSISTOR TRANSISTOR TRANSISTOR		
Q15 .16			2SA1124(Q,R,S)	TRANSISTOR		
PREAMPLIFIER UNIT: S (X85-1110-10)						
C1 .2 C3 .4 C5 .6		*	CE04LW1C100M CE04LW1A470M CF92FV1H123J	ELECTR0 10UF 16WV ELECTR0 47UF 10WV MF 0.012UF J		

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C7 .8 C9 .10 C11 .12 C15 .16 C15 .16			CF92FV1H332J CE04LW1V100M CK45FF1H103Z CK45FB1H222K CK45FB1H561K	MF 3300PF J ELECTR0 10UF 35WV CERAMIC 0.010UF Z CERAMIC 2200PF K CERAMIC 560PF K		EX M
C17 .18 C17 .18			CC45FSL1H101J CC45FSL1H221J	CERAMIC 100PF J CERAMIC 220PF J		M EX
IC1 IC1			AN6556 M5218P	IC(OP AMP X2) IC(OP AMP X2)		

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SPECIFICATIONS (U.S.A. and Canada models)

Audio Section

Rated Power Output

100 watts per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.05% total harmonic distortion.

Music Power Output at 8 ohms	225 W + 225 W
Total Harmonic Distortion	
LINE input to SPEAKER output	
(20 Hz to 20,000 Hz)	0.05% at rated power into 8 ohms
(20 Hz to 20,000 Hz)	0.04% at 1/2 rated power into 8 ohms
(1 kHz)	0.004% at 1/2 rated power into 8 ohms
Intermodulation Distortion (60 Hz:7 kHz = 4:1)	0.03% at rated power into 8 ohms
Damping Factor	30 (50 Hz at 8 ohms)
Power Bandwidth	10 Hz to 100 kHz at 0.2% T.H.D. 8 ohms
Frequency Response	10 Hz to 70 kHz, +0 dB, -3 dB
Input Sensitivity/Impedance	
Phono	2.5 mV/47 k ohms
Tuner, Tape play, CD/AUX	150 mV/33 k ohms
Signal-to-Noise Ratio (IHF-A) (IHF'66)	
Phono	75 dB for 2.5 mV input
Tuner, Tape play, CD/AUX	81 dB for 5.0 mV input
Phono Maximum Input Level	100 dB
Output Level/Impedance	170 mV, T.H.D. 0.05% at 1 kHz
Tape REC (Pin)	150 mV/330 ohms
Phono Frequency Response	RIAA standard curve ± 0.5 dB (20 Hz to 20,000 Hz)
Graphic Equalizer Control (60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 15 kHz)	± 10 dB
Loudness Control	+8 dB at 100 Hz (at -30 dB VOLUME Level)
General	
Power Consumption	4 A (U.S.A. & Canada models)
Dimensions	220 W (Other countries)
W: 420 mm (16-9/16")	
H: 110 mm (4-5/16")	
D: 277 mm (10-7/8")	
Weight (Net)	7.2 kg (15.8 lb)

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

KA-87

SPECIFICATIONS (Other models)

Audio Section Rated Power Output

100 watts per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.05% total harmonic distortion.

Maximum Continuous power output (IEC/NF) from 63 Hz to 12,500 Hz, 0.7% T.H.D.

8 ohms 80 W + 80 W
Both Channels Driven 65 W + 65 W 4 ohms at
1,000 Hz
110 W + 110 W 8 ohms at
1,000 Hz

Music Power Output at 8 ohms 225 W + 225 W

Total Harmonic Distortion

LINE input to SPEAKER output
(20-Hz to 20,000 Hz) 0.05% at rated power into
8 ohms
(20 Hz to 20,000 Hz) 0.04% at 1/2 rated power into
8 ohms
(1 kHz) 0.004% at 1/2 rated power in-
to 8 ohms

Intermodulation Distortion 0.03% at rated power into (60 Hz:7 kHz = 4:1) 8 ohms

Damping Factor 30 (50 Hz at 8 ohms)

Power Bandwidth 10 Hz to 100 kHz at 0.2% T.H.D. 8 ohms

Frequency Response 10 Hz to 70 kHz, +0 dB, -3 dB

Input Sensitivity/Impedance

Phono 2.5 mV/47 k ohms

Tuner, Tape play, CD/AUX 150 mV/33 k ohms

Signal-to-Noise Ratio (IHF-A) (IHF'66)

Phono 75 dB for 2.5 mV input
81 dB for 5.0 mV input

Tuner, Tape play, CD/AUX 100 dB

Signal to Noise Ratio Unweighted at 50 mW (DIN)

Phono 57 dB

Tuner, Tape play, CD/AUX 59 dB

Channel Separation at 1 kHz (DIN)

Phono (Terminated with

2.2 kohms) 55 dB

Tuner, Tape play, CD/AUX (Terminated with

47 kohms + 250 pF) 55 dB

Phono Input Capacity (DIN) 220 pF

Phono Maximum Input Level 170 mV, T.H.D. 0.05% at
1 kHz

Output Level/Impedance

Tape REC (Pin) 150 mV/330 ohms

Phono Frequency Response RIAA standard curve ± 0.5 dB
(20 Hz to 20,000 Hz)

Tone Control

Bass ± 9 dB at 100 Hz

Treble ± 8 dB at 10 kHz

Loudness Control +8 dB at 100 Hz

(at -30 dB VOLUME Level)

General

Power Consumption 4 A (U.S.A. & Canada models)

160 W (Europe, U.K. and Aus-
tralia model)

220 W (Other countries)

Dimensions W: 420 mm (16-9/16")

H: 110 mm (4-5/16")

D: 277 mm (10-7/8")

Weight (Net) 6.7 kg (14.7 lb) (Europe, U.K.
and Australia model)

7.2 kg (15.8 lb) (Other models)

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